The **future** of **interactive** entertainment

UK edition April 1996 £3.50 ¥2100 $ten

EDGE

Sony ■ Sega ■ Nintendo ■ 3DO ■ PC ■ Amiga ■ Atari ■ SNK ■ Arcade ■ NEC ■ CD-i

31

Issue **thirty-one**

nuGame culture



Too long the domain of game otakus and social recluses, gaming finally ditches its unsavoury image and breaks into mainstream consciousness. Edge tracks the rise of a phenomenon fuelled by marketing hype machines, design evangelists and musical icons

9 771350 159014 04



nuGame culture

The videogame renaissance?

The metamorphosis of the videogame – from venial pastime to cultivated entertainment form – is something that has been predicted for years. And yet, it is a transformation that is only just starting to show signs of evidence.

Until now, the crudity of most videogames has been the main limiting factor. While the average 10-year-old kid could relate to, and even become obsessive over, a handful of two-dimensional pixels, it has had the opposite effect on most people. At best, it has engendered casual indifference. At worst, blatant disregard. Despite its underlying challenges and gratification, videogaming failed to embrace the mass market and has earned the kind of derision the vegan community holds for MacDonalds.

But times are changing. And the catalyst in this gradual change is technology. Computers are now permeating people's lives to the extent that interactive entertainment, and more specifically, videogaming, are mere by-products of a digital revolution. Whereas videogaming was supported almost exclusively by the cheap and cheerful teenage console and home computing market, now it is slowly becoming swallowed by an amorphous digital entertainment behemoth.

This month, **Edge** taps into the underground community of designers, musicians and marketing pioneers that are reshaping the interactive entertainment industry. Some may suggest little has changed apart from the hype. But if videogaming sheds its acne-damaged skin in the process, then that's good news for everyone concerned.

The **future** is almost here…

inside EDGE

Voted Magazine of the year
Industry awards

Future Publishing

ABC (Audit Bureau of Circulation)

Printed in the UK

Contacts

Editorial

Future Publishing
30 Monmouth Street
Bath BA1 2BW

Telephone 01225 442244
Fax 01225 338236
Email edge@futurenet.co.uk

Subscriptions

Future Publishing Ltd
FREEPOST BS4900, Somerton
Somerset TA11 7BR
Tel Customer services:
01225 822510
Customer order line:
01225 822511
Fax 01458 274378

The annual subscription rate for one year is:
UK £36 (£32 direct debit), post free; Europe £63; rest of world £92
Overseas distribution:
Future Publishing 1225 442244

People on Edge

Jason Brookes editor
Jez Bridgeman art editor
Nick Harper production editor
Craig Brooks art assistant
Keith Stuart writer

Nicolas di Costanzo Tokyo bureau

Nathan Berkley advertising manager
(0171 447 3309)
Advertising fax 0171 447 3399
Craig Broadbridge production coordinator
Richard Gingell production manager
Production fax 01225 423118
Cathy McKinnon ad design
Janet Anderson production controller
Judith Green group prod. manager
Jon Moore pre-press services coordinator
Simon Windsor, Chris Stocker colour scanning and manipulation
Mark Gover, Jason Titley, Oliver Gibbs pre-press services

Dave Roberts assistant publisher
Chris Power publisher
Greg Ingham managing director
Nick Alexander chairman

Colour reproduction

Colourworks Repro, Bristol
Phoenix Repro, Bath

Print

Cradley Print, Warley, West Midlands
Edge is printed on Royal Press 90 gsm

Production of Edge

Hardware: Power Macintosh, PowerBook, IIsi and Classic by Apple
Software: *QuarkXPress*, Adobe *Photoshop*, Aldus *FreeHand*, Pixar *Typestry* and *Nisus*
Typography: (Adobe®)
ITC Franklin Gothic/**Heavy**
Bell Gothic Light/**Black**
Ocra
Gill Sans/**Bold**
Fifth colour: Pantone® 805

Cover

Cover image: 'NuGame Culture' designed by Jez Bridgeman



Photography: **Mark Koehler**













Photography: **Jude Edginton**





insideview

6 News







Virtua Fighter 3 (left), *Monty Python's Quest for the Holy Grail* (top right), VideoLogic demo (above)

Prescreen 30





F1 (top) and *Motor Toon GP 2*

Testscreen 68





Grand Prix 2 (top) and *Guardian Heroes*

Adeline 22

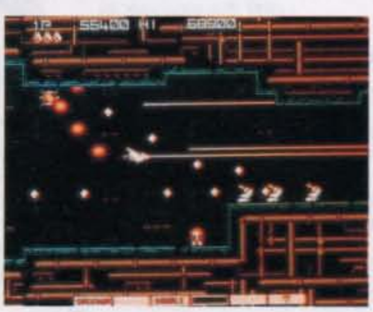


Photography: Jude Edginton

Multimedia 87



88 Retroview



AOU: Sega amazes with **Model 3** board/**page 6** • **Nintendo64** faces more delays /**page 11** • VideoLogic showcases PowerVR graphics /**page 12** • **Square Soft** ditches Nintendo for PlayStation/**page 15** • Saturn gets add-ons/**page 15** • MM rages at Milia/**page 16**

Cutting Edge

The latest **news** from the world of interactive entertainment

Model 3: Sega affirms arcade supremacy

Sega redefines the state of the 3D art leaving its rivals eating dust





Sega's unveiling of its new Model 3 technology and *VF3* (above left) made jaws slack and eyes bulge. A constant running demo was authenticated when Sega permitted four lucky individuals to briefly play one stage of the game





Dural was one of two characters that Sega made controllable briefly during the event

Once again, an important Japanese arcade show has been eclipsed by the efforts of industry giants Namco and Sega. Last year's JAMMA event saw the two finishing on equal ground, virtually matching each other, game for game. However, at the Arcade Operator's Union show held outside Tokyo in late February, Sega was undoubtedly the dominant force, presenting several highly anticipated titles, as well as its next generation of 3D coin-op technology.

Without question, AM2 provided the main attraction of the show, unveiling *Virtua Fighter 3* and officially introducing the new Model 3 board – delivering over three times more polygons than its predecessor. This was a surprise move considering Model 3 development has been significantly delayed over the past year or so. It was previously thought the system would not receive a premiere until JAMMA in September.

Virtua Fighter 3

As for *VF3*, before the show it was unknown whether the game would be presented in rolling or playable demo form. In the end, both were present, but the honour of actually playing the game was given to just four Japanese gameheads on the first morning of the →









Genuine evidence of the rendering performance of Lockheed Martin's R3D technology – Sega can take geometry from its own series of CG character portraits (far left) and render it in realtime at 60 frames per second...

→ event, with only two characters being selectable: Jacky and Dural.

Despite these limitations, the playable demo fulfiled its purpose – to prove how identical the running game was to the immaculate non-interactive demos shown throughout the event.

Most importantly, *Virtua Fighter 3* represents the latest breakthrough in the development of realtime 3D graphics. The characters' faces, for example, have an incredible degree of animation – their pupils move to follow opponents around the arena and their mouths can grimace and snarl (in some cases revealing teeth). To accentuate this growing level of humanity, each fighter's breathing is visible and, after performing a particularly demanding attack, their thoraxes expand and contract to accentuate the physical exertion.

The game features 12 characters, all of which were shown in the demo individually exhibiting their fighting techniques. Of the two new characters, one is a huge fat man who's flab wobbles when he gets hit, while the other is a female fighter named Umenokoo Jiaoi (artwork, top right), who practices Akido and has some incredibly powerful throwing moves. Of the old characters, Dural is an especially impressive update with a totally reflective body, mimicking the T1000 in Terminator 2.

In terms of backgrounds, all are resplendent with luscious texture-mapped detail. Jacky's stage was shown off in the playable demo and takes place in an impressive semi-constructed building. Here, the ground is actually translucent allowing some of the camera angles to be placed below the fighters. Also, there's a quaint garden backdrop, snow stages and a small island inhabited by Jeffry.

The graphical quality in *VF3* provides the logical progression in a

Who is it?

This director, responsible for such adrenaline-soaked classics as Point Break, Near Dark, The Loveless and Blue Steel, tackles that perennial favourite, 'futuristic Virtual Reality sex', in her latest film



Yu Suzuki – head of the Model 3 and *VF3* projects within AM2





Dural's incredible reflective body makes use of the R3D's Gouraud shading and 24bit texturing. Conversions to the Saturn could be tricky

Model 3 tech specs

Host CPU: Power PC 603e

Resolution: 496x384
640x480

Graphics: geometry engine averaging 1m polygons/sec
Renderer – 60m pixels/sec
24bit textures
Microtextures
Trilinear Interpolation

Shading: high specular Gouraud shading, fix shading and flat shading
Texture and edge multi-layered anti-aliasing

Lighting: parallel lights, 4 spotlights, pin spotlights

Special effects: zoning, fog
32 levels of translucency

Sound: SCSP x 2 (same chip as used in Saturn)
16bit CPU – 68EC000
Sampling rate – 44.1 kHz
64 voices, 2 stereo pairs
MIDI interface

LOCKHEED MARTIN

Sega's Model 3 board is still unfinished explaining why Sega only presented a brief interactive demonstration of its hardware. As detailed exclusively in E25, the board is based around Lockheed Martin's R3D/PRO-1000 chip, which is capable of rendering 750,000 textured, shaded, fogged and anti-aliased polygons every second. Model 3 uses a Power PC front end and two R3D/PRO-1000s in parallel to give a sustained average performance of over one million polygons/sec. This arrangement means that the main CPU isn't disturbed by graphics processing and is free to compute game code. In fact, Sega's new board is so advanced that *VF3*'s characters have more polys in their heads, than *VF2*'s had in their whole bodies. Awesome.

Continued next page





Virtua Fighter Kids: the same VF2 gameplay but with swollen craniums



it is...

Kathryn Bigelow, who's Strange Days stars Ralph 'Hamlet' Fiennes as a virtual memory pusher. In the future, people will simply put on the visor, load up a memory file and get to experience someone else's sex life. Urgh.

series which has gone from simple polygons, to angular textures, to realistic life-like figures. The characters' bodies are now so well constructed the fighters all bear a close resemblance to their CG portraits – which should come as no surprise given that CG portrait data was imported into the actual game. Consequently, the game looks and runs like a particularly good, and fast, pre-rendered sequence.

As for the crowd reaction, the *VF3* stand attracted so many people **Edge**'s photographer found it tough to get within 50 yards of the exhibit throughout the whole show. The bad news is *VF3* won't be out until much later in the year, possibly not until the JAMMA show in September.

Not content with showcasing *VF3* and Model 3, AM2 were also presenting two much-hyped Model 2 titles. *Sonic The Fighters*, now replete with all its characters, combines basic *Virtua Fighter* moves with Sonic characteristics such as spins, stars and helicopter jumps. The graphics are suitably colourful and cartoony and, as with *VF3*, character movements are extremely fluid. Perhaps the game's most interesting feature is the new morphing technique employed for some special moves – characters can change shape and extend their limbs – a feature perhaps inspired by Capcom's Dahlsim (*SF II*) or any of the *X-Men*.

Virtua Fighter Kizu, one of the more bizarre titles to be presented at the show, contains all the fighters from *VF2* as well as a strictly identical selection of moves. The big difference, of course, is that in *VF Kizu*, all the characters are presented as cute, large-headed children (or super-deformed as the Japanese love to term it). The game also features some shameless product placement – a growing feature in videogames. When Jacky wins a bout, he drinks from a can labelled 'Java Tea' – a famous Japanese brand name.

AM3 had several new releases at AOU although one game in development, *Last Bronx* (see p82), was not allowed to be shown off because it would have clashed with the proliferation of beat 'em ups created by internal rival AM2. However, the development team responsible for *Sega Rally* still had a couple of new titles to present.

Most notably, there was *Gun Blade NY*, a Model 2 shoot 'em up very much in the *Virtua Cop* mode. Here, instead of running around a cityscape shooting people, the player flies *over* the →





The licensing of its Model 2 technology to industry also-rans Tecmo and Jaleco has allowed Sega to transfer its high-end efforts onto Model 3. *Dead Or Alive* (above), *Super GT 24h* (right)







A real life Pai (top) tries her skills at *Sonic The Fighters*, another Model 2 curiosity





AM3's reputation for quality was upheld at AOU with the superb *Gun Blade NY* – a helicopter-based shoot 'em up with superb graphics

Continued



ST-V games were thin on the ground but AM3's hi-res *Decathlete* boded well for Saturn owners

→ cityscape, in a helicopter, shooting people. The city is based on New York and includes Times Square, the Rockafella Plaza and the UN building amongst its location settings. Apparently, to get a decent level of authenticity in the game, half of the *Gun Blade* design team flew over to the big apple to get a look for themselves.

Special features of the game include basic AI in the enemies (allowing them to dodge bullets) and a stage where it will be possible to take on aircraft carriers (presumably against a Statue Of Liberty backdrop).

Jumping on the retro bandwagon, AM3 also presented *Decathlete*, an ST-V system board game based on the classic *Decathlon* title. Although the athletes are now all polygon-based, the gameplay is the same old 'press buttons to gain speed' story. Could the 'frantic button presser' be on the verge of enjoying a comeback? Tragically, anything is possible in this business.

Sega also chose the AOU to officially announce licensed third party development using its Model 2 board. First up was Tecmo presenting *Dead or Alive*, a highly competent beat 'em up. The game has many similarities with Namco's *Soul Edge* – the characters are dressed in comparable garb and they use similar weapons. Furthermore, Jaleco were showing off *Super GT 24h*, a racing game apparently aimed, at the request of Sega, to compete with *Rave Racer*.





Namco's *Prop Cycle* is a fantastical 3D flight... on a bike. The player must peddle to stay up

Amongst a proliferation of sequels and games which had already been revealed at earlier shows (eg *Dirt Dash*, *Time Crisis* and *Soul Edge*), Namco really only had two key titles to present at AOU: *Tokyo War* and *Prop Cycle*. *Tokyo War* is a *Cyber Sled*-style tank battle game set in two real Tokyo districts (Tokyo Area and Tokyo Bay). The game,







***Tokyo Wars* is Namco's latest System Super 22 coin-op and was arguably its best game at the show. Featuring a head-to-head battle, each player is equipped with between 12–30 tanks and has to destroy the opponent's arsenal**

one of only a few System 22 titles to be presented, allows four players to take part at once. Protagonists can join either the white or green army which means, if there are two players on one side, they can compete or cooperate in order to win the game.

A curio to match *VF Kizu* is *Prop Cycle*, a title continuing Namco's obsession with physically-interactive gaming. Here, the player controls a flying bicycle which can soar over mountains, canyons and rivers, and can also glide through tunnels. To propel the vehicle, the player must sit on a mock-up bicycle and actually pedal – the faster he pedals, the faster the prop cycle travels. The title is aimed more at female players because of its 'softer' gameplay. Lucky them.

Amongst the also-rans were racing games, *Victory Lap* and *Alpine Surfer*. *Victory Lap* – using the System Super 22 board – features a similar look and feel to *Ace Driver*, but includes a new championship mode (where points can be stored up from race to race) and two new courses. In *Alpine Surfer*, the player stands on a snow board instead of two skis. There are also two modes available – free run and gate trial – and an interesting jump feature providing the game's most notable attribute.

Although they're basically budget products, System 11 coin-ops are becoming an important part of Namco's release strategy. This is the first time that using home console technology (System 11 is based on the PlayStation architecture) in an arcade board has been successful, perhaps because Namco are taking the idea seriously –





***Victory Lap* is Namco's follow-up to *Ace Driver*. Now, if only this had been System 23...**



Following *Alpine Racer* comes a snowboarding equivalent from Namco

Continued next page





Namco's PlayStation-powered System 11 games were impressive. From left, ***Xevious*[3]**, ***Dunk Mania*** **and *Soul Edge***

Continued

producing quality games like *Soul Edge* and *Tekken 2*, instead of farming out projects to lesser development teams. Basketball sim, *Dunk Mania*, for example, looked to be a graphically excellent title with flat-shaded players moving gracefully across the court. A PlayStation conversion is inevitable, possibly even eclipsing *Total NBA* when it appears later this year.

Finally, the retro bandwagon rolls on with *Xevious*[3], a 3D scrolling shooter based on the 12-year-old original. This time, though, the space ships are all textured polys with some having the ability to morph. Again, its System 11 and therefore PlayStation fodder.

Despite the ascendancy of Namco and Sega, many other companies had



Capcom's *Star Gladiators* (left) is its first home-grown effort to run on its PlayStation-based coin-op. *Street Fighter Zero 2* (right) was better

noteworthy titles to present. Taito, for example, pulled out of their two-year nose dive and revealed a new board, the FX-1, and two new games, *Psychic Force* and *Ray Storm*. The former is a 3D beat 'em up set in a cubic arena suspended in space. The game is rife with special moves, combos and special defences and the 3D arena is very reminiscent of AM3's *Dragon Ball*.

Comparable to *Xevious*[3], *Ray Storm* is another retro-esque vertical scroller. As with the Namco title, *Ray Storm* features polygon-based ships, instead of sprites, and a similar perspective. Taito's new FX-1 board seems to be more powerful than Namco's System 11 – the sprites move faster, effects are more impressive and the space craft are much more detailed.

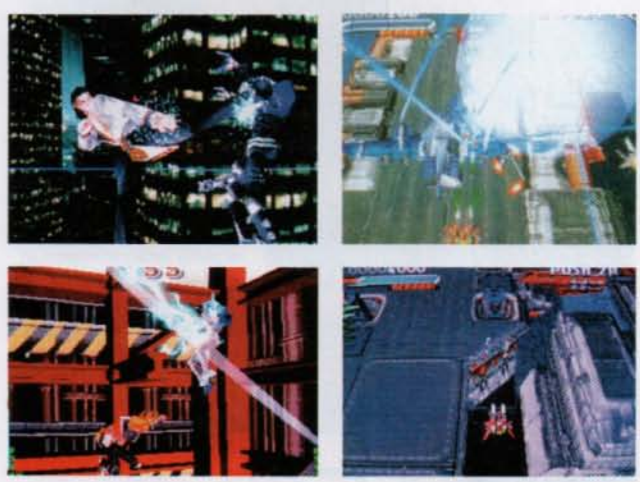
Capcom introduced two important new games – *Street Fighter Zero 2* and *Star Gladiators*. The latter, the company's first in-house 3D polygon based beat 'em up, drew a large crowd and is perhaps Capcom's concession to the dominance of next generation 3D fighting games. The title has a similar visual style to *Toshinden*, but characters have a futuristic look.

From the evidence on display at AOU, it seems Sega's domination of the arcades is currently unquestionable. *VF3*, *Sonic The Fighters*, *VF Kids* and *Gun Blade NY* make up a formidable release schedule.

Furthermore, by licensing its Model 2 technology to third parties, Sega can delegate competition with its main rival, Namco, to other developers (hence *Dead or Alive* vs *Soul Edge* and *Super GT 24h* vs *Victory Lap*), leaving the AM departments plenty of time to concentrate on original high-end developments. E



Konami's presence was low-key, although *Jet Surfer* was good fun



Taito's interesting *Psychic Force* (above left) took the 3D fighter and suspended it in mid air. *Ray Storm* (right) took a more familiar path

Data stream

Amount of money being invested in *Toonstruck* by Virgin Interactive Entertainment: **$6 million**
Amount of money lost by VIE in 1995: **$14 million**
Sales of Mattel's Barbie Doll in 1995: **£800m**
Worldwide CD-ROM unit sales, 1995: **38.7m**
Insurance value of Bert and Ernie, two original muppet puppets stolen from an exhibition centre in East Germany last year: **£82,000**
Estimated value of Miss Piggy, fortunately not stolen: **£36,000**
Machine hours taken to render the CG movie, Toy Story: **800,000**
Price of the new top-end Apricot Pentium P166 PC: **£2,599**
Price of Apricot 286 PC ten years ago: **$3,995 (roughly £2,599)**
According to Cosmopolitan, amount of British women who claim to have sex every day: **10%**
Amount of Russian women who claim the same: **20%**
Number of Mega Drives sold in the UK in 1995: **500,000**
Losses incurred by Sega in 1995: **¥26 billion (£160 million)**
Most popular pop song played at cremations: **Whitney Houston – I will always love you**
Number of discs in the CD-ROM collection covering 46 years of back issues of People's Daily, China's official Communist Party Publication: **92**
Cost: **$19,800**
Estimated number of copies of *Doom* that have been downloaded worldwide: **7,000,000**
Time interval between new computers being connected to the internet: **27 seconds**
Average age of PlayStation owner: **17**
Average age of readers of **Edge**: **24**

N64 Japanese delay looms

Yet another setback hits Nintendo and its 64bit console

A hold up in NEC's production of semiconductors has led Nintendo to consider delaying the Japanese launch of its 64bit console, originally expected to hit Tokyo streets on 21 April. With a planned initial roll-out of 500,000 units, an April launch would have left Nintendo short of around 300,000 machines.

At the time of writing, NCL is thought to be considering shifting the release back a few months, with the most likely launch date tipped for July. An announcement was expected to be made in the second week of March.

Meanwhile, the machine's US release date has been officially delayed until 30 September, with the European launch now pencilled in for late Autumn. According to NoA, the delay is due to projected Japanese demand for the console, although whether this date will change remains to be seen. In a current poll of Japanese software licensees, 65% predicted N64 would sell over three million units in its first year of sale in Japan. Consequently, Nintendo has decided to space out the global launch dates to ensure enough units are there on each release day.

Other announcements made recently by Nintendo include its dumping of 'Ultra 64' in the US and Europe in favour of the transglobal monicker, Nintendo64. The decision to dump the, admittedly naff, Ultra tag has been made in the interests of what Nintendo calls 'streamlining production' and 'building equity for one worldwide product'. In other words, sticking to one name is hoped to save production time and give the machine a stronger image. The latter concern may have, in part, been influenced by the success of PlayStation, whose universal name has given the console valuable branding.

Concerning the console

itself, the port on top of N64, which has so far been a mystery, has been confirmed as a memory expansion slot.



Appearing in USA Today, this ad broke the news of the delayed N64 launch

When the 64DD drive is released later this year it will come bundled with a 1 or 2Mb expansion RAM pack, to be slotted into the port to provide extra memory for disc and cartridge games.

This is likely to be a controversial move. Not only are Nintendo diluting the N64 standard by providing two formats for one console, they are also talking of memory upgrades – a strategy that seems more akin to Sega's fragmented upgrade paths.

Nintendo's attempts to create a totally encompassing machine could be misconstrued as a desperate and untidy bid to remain ahead of the competition, despite the protracted development period. ■



The memory expansion slot on N64's top side (right) will take 1Mb or 2Mb RAM cards similar to those that will slot in the joypad (left)

What is it?

This new head-mounted display device, worn like normal glasses and compatible with all consoles, gives the wearer the impression that the game is being viewed on a 62 inch screen, 10 feet away. But at what cost?

Nintendo

Rumours

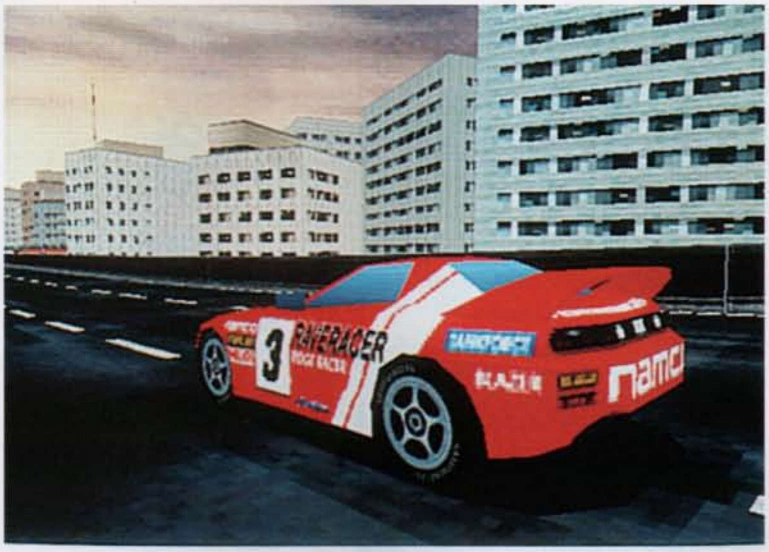
Edge has heard of other videogame projects that are currently under development within NCL's Kyoto HQ. First, the company has plans for a Pocket Boy – a cheap Game Boy-based portable priced around the ¥5,000 (£35) mark. Also rumoured to be in development are two colour Game Boy-style portables – one 16bit, one 32bit. Whether such projects will ever get the go-ahead is anybody's guess, however.

PowerVR heralds new standard in PC 3D

A 3D accelerator chip with coin-op backing takes on the PC industry

it is...

The provisionally-titled Virtual TV, by Virtual i-o, soon to be released in the States with a $399 price tag. The device can also be used to watch television. Whether or not the device will come with the usual migraine is yet to be seen



Namco's early *Rave Racer* port gives a good indication of the potential of PowerVR. The company ported its meshed-based arcade geometry via Videologic's SGL API

One of the biggest problems currently facing PC developers could be resolved faster than people think. Consolidating a relationship first announced over a year ago (**E**18), NEC and VideoLogic have just broken their silence by giving an early glimpse of the potential of its revolutionary PowerVR chipset. And the results are impressive.

A collaboration with leading Japanese coin-op developers, Namco, means that a full six months before NEC plans to bring VideoLogic's technology to market, an early demo of state of the art coin-op, *Rave Racer*, is already up and running on the system. This alone is a more than impressive enough vindication of the potential of the chipset. Running in hi-res 640x480 at 30fps, the demo is a mouth-watering taste of a fast, low-cost PC graphics solution, and just the fruit of a few weeks work on Namco's part. According to VideoLogic, the demo is handling four times as much graphic work as PlayStation *Ridge Racer*.

The level of ambition VideoLogic and NEC are channelling into PowerVR encompasses an even wider agenda than the voracious PC market, though. Not only do both companies envisage the technology becoming a standard-bearer for PCs across the globe, but there are also strategies in place to utilise the technology in arcade machines and even home consoles. Quite simply, PowerVR is being sold as the future of 3D graphics technology. And given the breakthroughs that VideoLogic has made in the design of its chips, it's possible it could happen.

Initially a project started in late 1991, Kings Langley-based VideoLogic approached the development of a 3D graphics accelerator by setting two main objectives. Vice president of development, Hossein Yassaie, recalls, 'One of the things we were really targeting was to knock out the huge memory requirement and memory bandwidth requirement normally associated with 3D technology. Eventually we arrived at a solution that does away with z-buffering and the need for lots of memory as well as providing a wide range of high-end graphic effects.' →



Mark Schoenhals (left), Hossein Yassaie (centre), and Trevor Wing

Ocean last in Dream Team

The doorway to becoming an N64 'Dream Team' member may slam shut once Ocean of America – the latest company to go on board – has slipped through. Howard Lincoln, president of NoA, has commented that recruiting too many third party developers would be 'a recipe for disaster', an opinion reflecting Hiroshi Yamauchi's infamous tirade at last year's Shoshinkai show. Ocean will develop a game based around the movie, *Mission Impossible*.

→ As previously detailed in **Edge**, PowerVR is unique in its approach to 3D rendering. While it dispenses with a conventional z-buffer (which encumbers processing and memory overheads), it can handle hidden surface removal in hardware through its own Image Synthesis Processor (ISP). This is performed on chip and yields more precise 3D sorting than Diamond Edge's nVidia card, for example.

PowerVR provides the highest level of performance among PC 3D chipsets currently available

Tad Otsuki, general manager R&D, Namco

In addition to the ISP, PowerVR's other chief component is its texture and shading processor (TSP) which applies texture and shading to pixels supplied by the ISP. Key to the minimisation of the PowerVR's memory requirement is the use of 'deferred' texturing. In most 3D rendering systems, polygons are textured and then potentially overwritten as objects pass in front of them. PowerVR only textures visible pixels (polygons or portions of polygons) and therefore in each frame, pixels on screen are only textured once and output pixels are only written to the frame buffer once. The saving in memory is anything between three and ten times when compared to other 3D systems.

In performance terms, PowerVR's 'infinite plane'-based architecture is impressive. This technology treats all polygons as infinite planes and allows for some advanced realism features with its ability to handle large polygons without consuming huge memory bandwidth (such as shadows and search lights which are inefficient to render using small polygons – a technique employed by most systems).

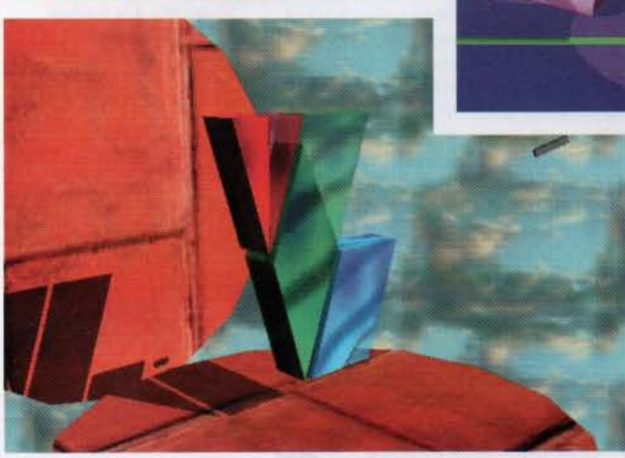
Custom lighting features, inherent to infinite planes, can also contribute to save memory. According to Hossein Yassaie, '[in the *Rave Racer* demo] Namco hasn't had the chance yet to exploit the chip's features – they are currently using lighter textures for the entrance to the tunnel – but with the chip's in-built lighting models they won't need them.'

Where PowerVR differs most from its rivals is in its use of the host computer's CPU as a geometry transformation engine. To max-out the performance of the PCX1, PC owners will need a 200 MHz Pentium, and the introduction of PowerVR is being timed so that it coincides with the introduction of 150MHz Pentium systems. 'Consumers are already educated that they need the highest performance PCs if they want to be able to take advantage of the latest 3D graphics technology,' claims VideoLogic's Trevor Wing. 'In fact, last Christmas people were trading in P90s and P100s for the latest 133s!'

Given both VideoLogic and NEC are preparing to introduce the PCX1 at E³ in May, licensed manufacturer NEC will start selling it to third parties in numbers during the summer, meaning cards will probably appear on the PC market towards the Autumn. NEC's Mark Schoenhals explains: 'We're sampling the arcade solution pieces in the first quarter this year and the PCX1 pieces in the second quarter, with mass production of the PCX1 in the third quarter.' Namco hopes to have the finished conversions of *Rave Racer*, *Tekken* and *Air Combat 22* simultaneously on display at the show in May.







The realtime lighting algorithms in PowerVR are demonstrated by these images. Notice how the translucent logo still gives a shadow



Hossein Yassaie, VP of engineering at VideoLogic's UK HQ

Developers back PCX1

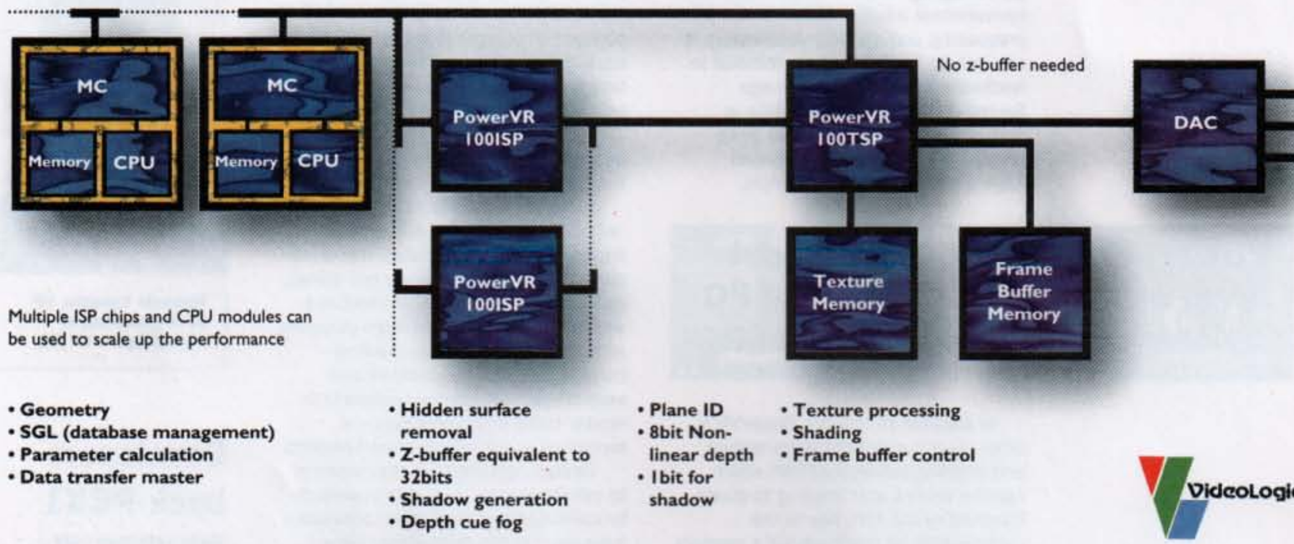
Many companies are believed to have signed up for PowerVR development, including Looking Glass Technologies, Gremlin and Psygnosis.

Dominic Mallinson, technical director at Psygnosis, told Edge: 'We're really keen on all the new 3D technology for PCs and I'm optimistic that the PC will finally become a machine for running arcade-style games. The VideoLogic chipset is one of the best I've seen and I'm confident it'll be one of the major technologies.'

Rob Gurwitz, VP development, Looking Glass Technologies commented officially: 'The PowerVR architecture addresses two of the real limiting factors in delivering high-performance 3D graphics for our products: texture bandwidth and memory costs associated with z-buffered hidden surface removal. We are looking forward to taking advantage of these benefits with our 3D flight simulator, *Flight Unlimited*.'

Continued next page

PowerVR scalable architecture



Videologic's and NEC's patented PowerVR system is unique in its approach to z-buffering and texturing. The PCX1 chip incorporates the OSP and TSP on a single chip instead – over which NEC has the exclusive manufacturing rights

Continued

To get Namco's perspective on VideoLogic's silicon, **Edge** spoke to the general manager of its Japanese R&D department, Tad Otsuki. He remarked, 'I'm confident the PowerVR technology provides the highest level of performance and functionality among PC 3D graphics chipsets currently available or under development.'

Because of the scalability, increasing performance on the chipset is truly trivial
Hossein Yassaie, vice president engineering, VideoLogic

However, to gauge the performance of the PCX1 from the current demos isn't easy. For a start, the version of *Rave Racer* **Edge** witnessed was running on a 120MHz Pentium and was only the results of a few weeks work. Despite it's undeniable technical prowess, it far from vindicates the claims of 'better than the arcade version' made by VideoLogic's Trevor Wing in **E**30.

As could be expected, the PCX1 still falls way short of the performance of a high-end coin-op IG such as Namco's System Super 22 board running *Rave Racer*. Designed for a sustained rate of 240,000 polygons/sec, System 22 manages this number almost irrespective of polygon size – and amazingly, even if each polygon takes up 4096 pixels. Namco believes the Pentiums available later this year will bring the PCX1 to within one fifth to a quarter of the power of System 22.

When running in parallel, though, PowerVR will really come into its own. The addition of more ISPs and CPUs dramatically scales up the performance of the system, and for high-end arcade use, VideoLogic claims PowerVR can manage a million or so polygons (ie Model 3-standard performance) 'at a very competitive price' with the potential to go up to two million. 'This is definitely a significant market,' assures Yassaie. 'Many of the best games are coming from the arcades – companies like Namco exploit the market well – and there's also a lot of focus on low-end machines, too.'

In such a fast-paced technological market the importance of a scalable, future-proof architecture is paramount. VideoLogic claims it's a relatively easy task for them to upgrade PowerVR when CPU performance eventually outstrips the current generation – something likely to happen in 1997. 'For us, increasing performance on the chipset is truly trivial,' adds Yassaie. 'Because of the scalability, all it takes is for us to alter the hardware source code and out pops a new chip that's twice the speed – literally. Where you'll see our research directed after this will be bringing new capabilities to the chipset – new features and a better level of reality.'



NEC is crucial in the PowerVR equation. Mark Schoenhals (above)

PC gets even more 3D

A family of 3D graphics accelerators, for use in – surprise, surprise – PCs, are being co-developed by Argonaut software and chip-makers LSI Logic, and incorporating Argonaut's BRender graphics technology (see E10). When the graphics accelerators are released, they will join VideoLogic's PowerVR chip and the Diamond Edge chip (E29) in the race for graphics domination on the PC. However, it is unclear whether the chips will be compatible with Microsoft's *Direct3D* software for *Win95*.

Sony muscles in as Square ditches Nintendo

Nintendo stalwart Square Soft gives N64 the boot for PlayStation

As hinted in last month's **Edge**, Square Soft has abandoned its exclusive relationship with Nintendo and has stated it will not be developing games for N64.

This loss to Nintendo will be considerable. Games such as *Final Fantasy* and *Secret of Mana* were instrumental to the success of the NES and SNES and subsequent Square titles have assured a huge market for Nintendo in Japan. More importantly, the move is further proof that Nintendo's domination of the videogame industry is eroding.

The exact reasons behind the break-up are unknown. 'We are currently not going to be developing for the N64 system. Square of Japan did not like the development kits for it, and sent them back to Nintendo,' was the official word. However, earlier reports from Square indicated differences in opinion with Nintendo, regarding future software development and publishing, were to blame. It could be that Square felt neither the cartridge or 64DD formats would allow enough memory to produce a suitably epic RPG.

Adding insult to injury, Square has begun to develop for PlayStation, with several titles planned for release over the coming year. The most cruel blow is the fact that the first release will be *Final Fantasy VII* (p35) which was set to be one of the key titles for the N64. Allegedly, the premiere RPG-maker is also considering developing for Saturn and PC. It seems the break-up has given the company new found creative freedom.



Square Soft's Tokyo HQ. The much-awaited *FF VII* will not be on Nintendo

Saturn gets ROM and link-up boost

Sega add-ons are brought in to make Saturn more flexible



Sega has plans to produce the first Saturn title to take advantage of a newly developed 'Advanced ROM System'.

The game, a conversion of SNK classic, *King of Fighters '95*, is CD-based, but uses an extra cartridge which acts as a ROM extension and plugs into the slot on top of the console. The necessity of the cart stems from the massive amount of memory taken up by bitmapped graphics in this type of beat 'em up – too much for Saturn's conventional RAM to handle.

The extra data provided by the cartridge makes Saturn the perfect console to receive Neo Geo ports like *King of Fighters*. Furthermore, the price – ¥7,800 (£55) – will not be high enough to deter gamers. In fact, the relative cheapness of the combined CD/cartridge system will perhaps attract consumers who were previously unable to afford SNK games in their expensive Neo-Geo incarnations.

Apart from the 'Advanced ROM System', Sega have also developed a Saturn link-up cable, due for Japanese release in February. This is a significant progression for Sega – PlayStation has been making use of its link-up cable for several months, and it is odd that Sega have not produced one sooner. Odder still, the first game to be developed for the cable, Riverhillsoft's cutesy, cartoon-style *Gebockers*, is a third-party game (as was PlayStation's first linkable game, *Metal Jacket*). Surely it would have been better to showcase the cable with *Sega Rally*, a game that uses link-up in the arcades.



The Saturn version of Neo Geo beat 'em up, *King of Fighters '95* (above), will be shipping with a ROM cart (top)



Gebockers (above), the first game to appear for Saturn to use a link-up cable. But where's link-up _Sega Rally_?



Milia: **CD-ROM** showcase

CD-ROM eclipses all other forms of digital media at Milia 96

The third annual Milia show, held in Cannes between 9 and 12 February, offered ample proof, as if any were required, that CD-ROM is the electronic medium of the moment. Although dominated by multimedia publishers, the show suffered no shortage of games manufacturers eager to showcase their forthcoming CD-ROM-based efforts.

As many of the familiar games giants opted to keep their powder dry until E³, several lesser stars took the opportunity to grab some of the limelight. Chief among these was US developer 7th Level, a Hollywood-based PC/Mac games developer less than two years old and best known for the quirky beat 'em up, *Battle Beast*.





New CD-ROMs include a *Monty Python* title (left), and a pornographic CD featuring the first multimedia porn star

According to the company's president, **Bob Ezrin**, who, in a past life, has produced records by Pink Floyd, Peter Gabriel and Kiss, 'we are looking to release ten games titles this year.' Among these are *Monty Python's Quest for the Holy Grail*, which will include games such as *Spank The Virgin*, as well as a Terry Gilliam-animated sketch called King Brian.

Monty Python is scheduled for summer release, with two high-tech action adventure games, *G-Nome* and *Shark Boy*, and an Ace Ventura game, following in the autumn. Accompanying these is *Return to Krondor*, long-awaited sequel to *Betrayal of Krondor*, based on Ray Feists's Krondor series of books. Ezrin also said the company will start porting to PlayStation before year's end.

Perhaps the least likely company showing games was IBM, which has launched itself as a games/multimedia CD-ROM publishing force with a portfolio mainly consisting of software commissioned from other developers and including the excellent rock star-sim *Quest for Fame* (see page 87). Upcoming IBM games include a *Windows 95* version of *Power*, its networkable Risk-like strategy game, boasting much-improved graphics over the existing execrable DOS version.

IBM, too, is preparing PlayStation games – including a version of *Quest for Fame*, scheduled for pre-Christmas. It also demonstrated *Ted Shred*, a wacky PC/PlayStation rollerblading/surfboarding/skateboarding platform game written by Digital Domain, and *Pandemonium Golf* from Dreamers' Guild, a crazy golf game for the PC which, oddly, takes place in lovingly created 3D representations of New York and other US cities, rather than on a golf course. Both should be on sale this Christmas.

A number of big names from the media world chose Milia as a launchpad into uncharted CD-ROM-based waters. Rupert Murdoch's News International unveiled a new division called News Multimedia, previewing *Enigma*, a *Spycraft*-type game set in the nerve centre of the Allies' codebreaking efforts in WWII. The BBC also promised games based on its roster of TV programmes. Although typically secretive, the thought of a Doctor Who or Wallace & Gromit game is enticing.

But **Edge**'s alternative award for silliest game genre goes to Barcelona's AZ Multimedia for *CyberXperience*, a pornographic interactive adventure for PC and Mac. The idea is to save Dutch girl, Nikie, from assorted robots and creeps. Persistent players will find the game's climax involves bringing Nikie to a... climax. The UK distributor will be none other than Virgin.





News International's war game *Enigma* (top). IBM's strategy game, *Power* (above)





7th Level asserted their multimedia talents with *Return to Krondor* (top) and *G-Nome* (above)

Kismet Atari

Atari Corp has merged with PC disk drive maker, JTS, in what can only be seen as the once-premiere company's withdrawal from the videogames business. Atari has not officially abandoned the Jaguar, however, and it is likely remaining stocks of hardware and software will be sold on before any further decisions over the company's future are made. Furthermore, a buyer of Atari's 'intellectual properties' will be sought. Well, you know what they say about a fool and his money...

Datebook

March

The Computer Game Developers Conference – March 30-April 2, Santa Clara, CA. Chris Crawford's game design meet – features seminar sessions on internet gaming, 3D cards and, gulp, 'The challenge of interactive movies'. Tel: Miller Freeman **415-905-2341**, fax **415-905-2222**

April

ECTS – April 14-16, Grand Hall, Olympia, London. Premiere European computer trade bash. Not open to the public or children under 18. Tel: exhibitor hot line **+44 (0)1203 460121** (also contact Blenheim Exhibitions on **+44 (0)181 742 2828)**

Concepts 96 – April 18-20, Orange County Convention Centre, Orlando, Florida, USA. Trade and public techno show. Tel: **1-703 264 7200**, fax **1-703 620 9187**

Computer Mania – April 19-21, Convention Centre, Tampa, Florida, USA. Tel: **1-415 578 6900**, fax **1-415 525 0194**

May

World of Entertainment 96 – May 2-4, Prumyslovy Palac, Prague, Czech Republic. Tel: **+44 2 991 1006/1373**

Tribal Gathering 96 – May 4, Otmoor Park, Beckley, Oxford. Dance music festival sponsored by Sony and featuring Underworld, Black Grape, etc. Not quite Glastonbury, but worth a trip. Tel: information line **0181 963 0940**

PC 96 – May 14-16, Convention and Exhibition Centre, Brisbane Australia. Australia's biggest PC show. Tel: **61-3 867 4500**, fax **61-61 3 9867 7981**

E³ – May 16-18, Los Angeles. The videogame event of the year. Tel: Electronic Entertainment Expo **800-315-1133**, fax **617-440-0359**

June

3D Design Conference – June 12-14, The Marriott Hotel, San Francisco, CA. Addresses the latest technical information for 3D designers. Tel: Miller Freeman, inc, **415-905 4994** or FS Communications, **415-691 1488**

Show organisers: if your show isn't listed here, it's only because you haven't told **Edge** about it. Do so on 01225 442244, or fax us on 01225 338236, or send details to **Datebook, Edge, 30 Monmouth Street, Bath, Avon BA1 2BW**

Bad Press

The media's obsession with drug abuse has, unbelievably, permeated the videogames arena once more. This time PlayStation racer, *wipEout*, stands accused. Plus, Amish-like households of Hull should lock up their children – Mickey, Donald and Pluto go hardcore

Sony in dEEp troublE

Fists of fury have been hammering on Sony's doors this month after it was revealed in The Sun that an ad for *Wipeout* was 'glamourising drugs' to 'children as young as three years old'. The ad shows kids 'slumped in chairs who appear to have overdosed. The letter E is always in capitals – like a reference to Ecstasy' (and indeed, the game's name could be interpreted as whip-E-out). Quite rightly, Tory MP Terry Dicks has called it an 'outrage'.

The mere suggestion that a game of *Wipeout*'s calibre is targeted at three-year-olds is not just an insult to the programmers at Psygnosis but all those noble souls who have spent so many cruel hours grinding along the barriers of Firestar. On a more serious note, however, **Edge** is naturally keen to stamp out narcotic abuse in computer games and in the public interest has handed over the names of those responsible for *Loaded, Twisted* and, of course, *tEmpEst 2000*. Archer Maclean, creator of notorious acid-fest, *Dropzone*, is rumoured to be helping police with their enquiries. (Source - The Sun - Feb)

Walken on the not so wired side

Esteemed, and it has to be said, pretty damn scary actor Christopher Walken, recently stumbled out of his depth briefly during a Film 96 feature on interactive movies. When quizzed during an interview over his decision to star in Electronic Arts' forthcoming horror epic, The Darkening, Walken, obviously keen to stress his affinity to the digital revolution, remarked, 'It'll be very important in the future, this, erm, internet CD-ROM information superhighway.'

Pluto in porno shocker

Children in Hull risk being exposed to CD-ROM pornography, consumer watchdogs have warned recently, after a recent batch of imported CDs from America, 'including several cartoon titles', was found to contain 'sexually explicit acts between men and women'. Regrettable, indeed. Still, it could have been worse. At least the 'acts' in question were confined to just men and women. The sight of Mickey and Pluto becoming anything more than 'just good friends' would most certainly make an impression on unwary tots.

Anyone who comes across such illegal material should contact Humberside Trading Standards on 01482 224000. Or send the offending material in total confidence to **Edge** at 30 Monmouth St, Bath.

Cyber censorship

Still regarded as the last bastion of free speech, has the internet finally succumbed to the censor's fetid grasp?

It seems every month America's self-appointed guardians of national morality find a new monster to blame for the corruption of children. Thrash metal, dance culture, movies, and teen magazines have all been thrust into the firing line in the past few years. Now computer technology has been targeted. Last December, Senator Joe Lieberman managed to get a ratings system slapped on videogames amidst cries that they were turning kids into mindless zombies (hasn't religion been doing the same thing for thousands of years?). Recently, President Bill Clinton signed an act which could have devastating consequences for the World Wide Web and other branches of the internet.

The Communications Decency Act, part of the far reaching Telecommunications Bill signed by the President on February 8, makes it illegal to transmit 'indecent material that could be viewed by a minor' over a computer network. The punishment? A fine of up to $250,000 and/or two years in prison.

Although US justice department attorney, Anthony Coppolino, has argued the Act does not seek to ban, but merely wants to find a way of blocking the exposure of indecent images to children, the vague, arbitrary wording of the bill is rather less reassuring.

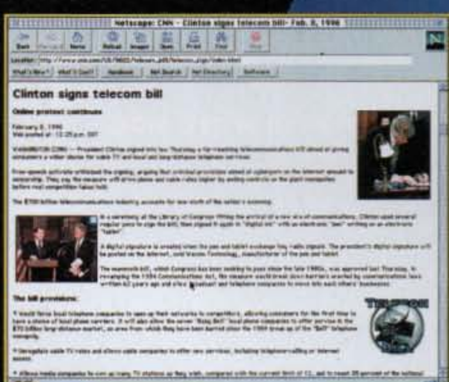


Internet pages worldwide turned black in protest of the Communications Bill

Civil rights groups in America are worried about the Act's failure to distinguish between indecent material – child porn, etc, which is obviously a morally bankrupt area, and adult material which may not be suitable for children, but which is hardly indecent. In other words, the Act basically makes it illegal to post anything on the net which shouldn't be viewed by minors. This would include, therefore, information about safe sex, information on human rights abuse, pages by victim support groups dealing with rape or sexual assault, the list goes on.

Even if the Act does limit itself to banning 'indecent' images, the wording is still far too vague. What exactly is an indecent image? Medical pages would be in trouble, so would virtual art galleries.

The Act has provoked a storm of protest amongst America's internet community. Over the weekend of Feb 8-10, hundreds of pages that would be affected by the Bill appeared with black backgrounds in order to show the extent of the ruling. The campaign was also backed on the net by companies such as Netscape, Compuserve and the Electronic Frontier Foundation that stated to Reuters NewMedia, 'Congress has prepared to turn the internet from one of the greatest resources of cultural, social and scientific information, into the online equivalent of the children's reading room.' Many see the Act as tantamount to censorship – an infringement of civil liberties and a direct contravention of America's first amendment – the much-prized right to free speech.





When Bill Clinton signed the Telecommunications Bill, he did more than stop the right to publish porn on the net – the Bill encompasses all things 'indecent'

But how successful can a merely national effort toward net censorship be? The web is a worldwide network, so Americans who want to view banned images can easily visit sites in Europe, Asia, etc. In any case, if Coppolino is telling the truth and the Act does merely seek to protect children, there is plenty of software available which blocks net access to certain sites, requiring the input of parental codes.

Once again, the Act shows both governmental ignorance toward information technology and the inability of right-wing reactionary groups to understand that content unsuitable for children is not necessarily indecent.

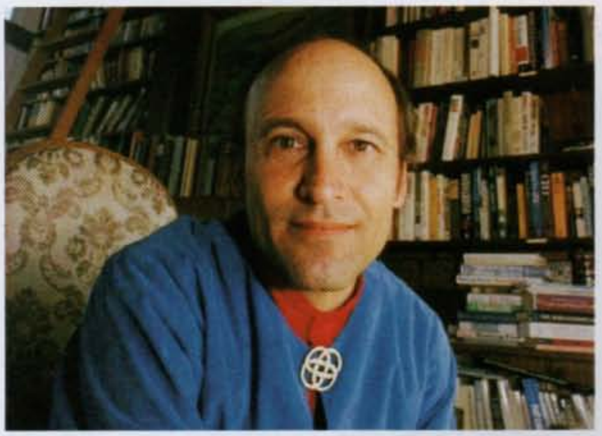
On a lighter note, when Playboy was asked whether the ruling would cause them to pull its 'playmate of the month' page (http://www.playboy.com) from the net, a spokeswoman said, 'Good heavens, no! Of course we're not going to shut it off or change the content, it's one of the most popular sites on the web.'

For more information

The Electronic Frontier Foundation website carries detailed information about the Act and how to protest. It can be found at http://www.eff.org/

The way games ought to be

Hi-octane games theory by Chris Crawford



Number 2: **Hollywood and Silicon Valley**

Is the blend of silicon and celluloid a match made in heaven, or a hellish partnership? If interactive entertainment is the child of this marriage, what does that hold for gamers?

The starting point of this discussion is the conflict between plot and interaction, for which there are theoretical reasons. They are best seen from the point of view of the plot faction. Many of these people are writers. Plot creation is, from their point of view, an enormously difficult task demanding great talent and creative energy. The thought of permitting an audience to mess up their carefully crafted plots leaves them cold. Knowing how difficult it is to create a plot that works well, they realise that any intrusion by the audience into the process will only yield rubbish. If interactivity requires the audience to involve itself in the direction of the plot, then clearly – according to this side – interactivity and plot are incompatible.

Add to this the attitude of the other side. The protagonists of interaction tend to take a dim view of plot. The strongest example of this is the possibly apocryphal story about id software and the creation of *Doom*. There was, so the story goes, some dispute within the organisation about the proper role of the story in the game. One faction argued that there should be some story element to tie everything together. The other faction argued that *Doom* was to be an action game, pure and simple, and that 'we don't need no stinking story.' In time, the anti-story faction won out, the losers left the company, and nowadays story is referred to within id as 'the S word.'

So the story goes.

Now, consider one of the most powerful storytelling products to appear on a CD: *The Madness of Roland*. This is a story with no interaction whatsoever. It would seem that the author of *The Madness of Roland* had said to himself, 'we don't need no stinking interaction.'

What's particularly interesting is that plot and interaction seem to contradict each other in the sales figures. The top games of the last year have been games with all interaction and no plot (*Doom II*) or games with all plot and no interaction (*Myst*, *7th Guest*). Could it be that there is no workable middle ground?

One of the things that really trips up creative people new to the industry is the problem of control. They usually come from a creative environment in which artistic control is absolute. A writer, for example, exercises total control over the work. He decides the plot, the characters, the interactions between the characters, how they respond to situations – everything. He may have to share his control with somebody else – an editor, perhaps, or some other collaborator. But even then, this little clique retains absolute control over the work. This complete creative control applies in all traditional media: literature, movies, television, music, painting, theatre – the artist always controls the experience.

Such control is both necessary and desirable in these media. If I buy a book, I don't expect to open it up and find blank pages with an exhortation from the author to 'fill them with whatever feels good.' That's his job! When I pay good money for information, I expect to get some information, not a blank page. Thus the expectation of control is deeply embedded in the thinking of all artists from conventional fields. They just assume they'll have control over the situation.

But this expectation is seriously out of touch with the strange new world of interactive entertainment. The fundamental, unavoidable truth is that the audience should make all the critical decisions. The audience is the protagonist, and the audience determines the protagonist's actions, not the artist.

Most artists just can't get this down their craws. They refuse to let go of their direct creative control. In the process, they deprive the interactive entertainment audience of any meaningful choice. Their work frog-marches the audience down a primrose path; after all, the artist knows better than the ignorant audience. The artist has a clearer artistic vision; if the audience were allowed to intrude into this process, the clumsy oafs would only spoil the artist's beautiful plan.

What overwhelming pride! What self-centred narrowness! Such people should stay in their expository fields and bestow their brilliance upon passive audiences in time-honoured fashion. They should certainly have stayed out of the interactive fields.

On the other hand, if the artist surrenders direct control when moving into the interactive arena, what then motivates the artistic spirit within his breast? Why should he endure creative agony when it will not yield the satisfaction derived from creation? The answer is that control should not be lost, but instead it should merely become indirect.

Perhaps a theological analogy might clarify the issue. Assume that God exists. Assume further that this God controls the universe, that all things happen according to his will. Question: how closely does God control the universe? Does God attend to every raindrop, specifying its position from one instant to the next? Does God guide the murderer's fingers and put every syllable into the saint's mouth?

Why would it be necessary for God to exercise such micro-management over his universe? Why would he busy himself with so many petty details? Would it not be more reasonable for him to establish whatever laws of nature struck his fancy, and then allow those laws to act without divine intervention? He still controls the universe, with a greater degree of indirection.

In the same fashion, when game developers create a microscopic

universe inside a computer, the audience become petty gods. They control their universes – but must it be so as puppeteers? Can users not derive greater satisfaction from their creation by playing the role of architect rather than puppeteer, granting the audience the autonomy to exercise its 'free will?' Is this not a wiser and better way to play god?

Of course, this is the solution. But Silicon Valley's and the game community's continued fascination with Hollywood isn't helping to bring this solution about.

For Hollywood, storytelling lies at the centre of the creative universe. The story is everything; all else serves to advance and improve the storytelling process. Thus, Hollywood comes to the marriage with Silicon Valley and asks, 'how can the high-tech gizmos of Silicon Valley be used to improve our storytelling?' Creativity in Hollywood means creativity in making stories. First, a story to tell is decided upon, then it is figured out how to do it. The technology is just another means of supporting this process.

For Silicon Valley, technology lies at the centre of the universe. We play around in labs with the technology, trying out all sorts of bizarre ideas, until we come up with something that's faster, bigger, smaller, or cheaper. Then we ask ourselves, what can we do with this superior technology?

The Hollywood people look at this and shake their heads in disgust: 'How can those Silicon Valley people get anything done when they don't have their priorities straight?' The Silicon Valley people counter that this is the nature of the creative process in a high-tech environment. The fact is, this method has worked beautifully for years and Silicon Valley isn't about to abandon the technique.

So how are worthwhile products going to be made when the key creative types in Silicon Valley and Hollywood are as compatible as discs for PlayStation and Saturn? How can any relationship work when they say 'potahto' and we say 'potayto'? The obvious answer is that creative teams need to be formed that merge the best talent of Hollywood and Silicon Valley.

Shotgun marriages don't work. The worst mistake to make is to take some 'top Hollywood talent' and some 'top Silicon Valley talent' and put them together on the same team. Sorry, you can't have two prima donnas in one show.

What does makes a person 'top talent' in his/her respective field anyway? The answer is, of course, excellence in that field – which pretty much precludes competence in a radically different field. A great actor is not expected to be good at woodworking. Nor is a hot-shot director expected to be a hot-shot brain surgeon, or a stellar screenwriter to be a top-notch golfer. So why would anyone expect any of these people to be good at interactivity? And the same thing goes, of course, for the Silicon Valley people trying to tell stories.

You can't get a duck by strapping swimming fins on a chicken, nor by gluing feathers on a carp. What is needed is an organic integration of both sets of skills, and jamming people with disparate skills on to one team does not constitute 'organic integration.' Instead, a successful team needs one person with strong interactive skills and one with strong storytelling skills.

Right now, such people don't exist. They have to be grown. Certainly, the last thing to do is to start with a big-name person from one field and hope they can learn the other field. The net talent of a bi-talented person is not the sum of the individual talents, it's the product. Thus a 'ten' in the storytelling side who learns enough to be a 'one' on the interactivity side doesn't perform anywhere near as well as somebody who's a 'five' in each of the two fields. Like genes, they don't average – the dominant gene wins and the recessive gene loses.

The way to do it is to start with some bright-eyed, bushy-tailed kid with lots of promise and very little else, and then force that kid to play on both sides of the fence. A young person has less to unlearn than an old pro. Moreover, I think you're better off starting with arts/humanities people than with science/technology people. My impression is that one programmer in 100 has the aptitude to learn storytelling but that one writer in ten has the aptitude to learn programming. Programmers are made, but artists are born. And like the race problem, it won't be solved by getting the old racists to talk nice to each other. They'll never get it. Every penny spent trying to get them to work together is money down the drain.

Some may object that this is great theory, but in practice, nobody could ever handle so deeply intellectual a process. Yet this process-intensive style of storytelling is done all the time, and by amateurs, no less. Here's grandpa taking little Annie up to bed.

'Tell me a story, Grandpa!' she asks as he tucks her in.

'OK,' he replies, 'Once there was a pretty little girl who had a beautiful pony...'

'Was it a white pony?' Annie interrupts.

'Oh my, yes, it was as white as snow. It was so white that the sunlight reflecting from its coat dazzled the eye. And together they would go riding on the beach...'

'Did Annie and the pony ride in the mountains, too?'

'Why yes, as a matter of fact, they did. After riding along the beach, they would ride up the green canyons, jumping over bushes and ducking under tree branches, until they came to the very tip of the snow-covered mountains. And there they would play at jumping over the mountain's boulders...'

'I don't like to jump.'

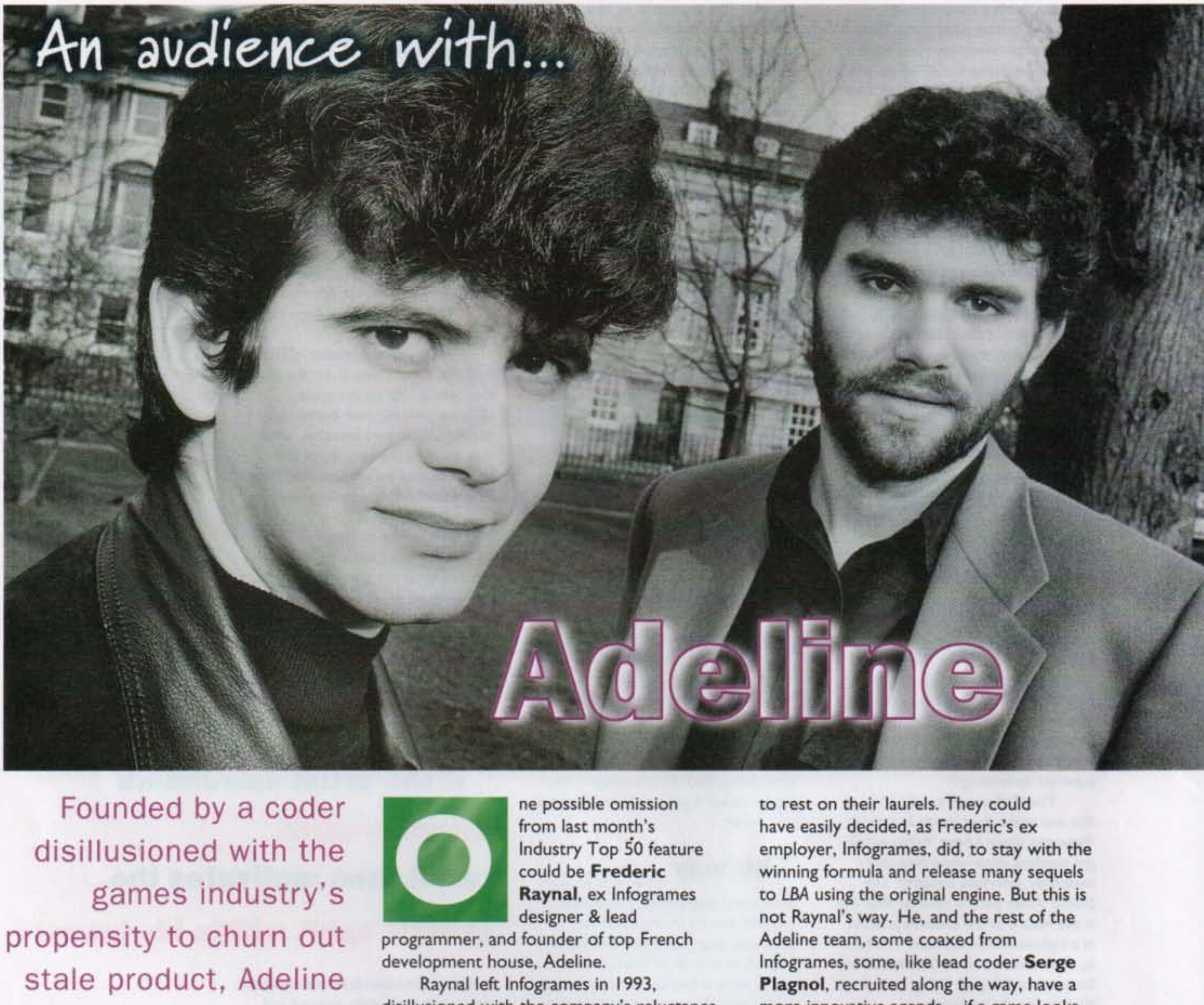
'Well then, instead of jumping, she would let her pony graze in the rich deep grass...'

And so the story goes. Note that grandpa does not respond to Annie's interruptions with 'Shuddup, kid, you're messing up my carefully prepared plot!' He wants those interruptions, his storytelling thrives

If the artist surrenders direct control, what then motivates the artistic spirit within his breast?

on them. Grandpa does not enter the room with a carefully planned and polished plot, all set to dazzle Annie. He comes in with basic principles of storytelling, and then he makes up the story as he goes along – in response to Annie's needs and interests. The story that he creates is very special, it means more and has more emotional power than any high-tech Hollywood script. Yes, it lacks the careful plotting, the intricate development, and the glorious special effects of Hollywood. But its roughness is compensated for by its customisation. Sure, Annie likes The Lion King, but she loves Annie and the White Pony.

Now, if some no-hoper of an amateur storytelling grandpa can pull that off, why can't the big-shot pros do the same? E



Founded by a coder disillusioned with the games industry's propensity to churn out stale product, Adeline is the epitome of French development – style and gameplay conquering massmarket appeal

One possible omission from last month's Industry Top 50 feature could be **Frederic Raynal**, ex Infogrames designer & lead programmer, and founder of top French development house, Adeline.

Raynal left Infogrames in 1993, disillusioned with the company's reluctance to employ new ideas and concepts in the *Alone in the Dark* sequels. Instead, he took the ideas and trawled them into Adeline's debut, *Little Big Adventure*, a beautiful, offbeat title that confirmed Raynal's expanding company as one of France's four major software developers. Judging by early demos it looks as though the style, vision and attention to detail that went into *LBA* have also found their way into Adeline's current developments: a sequel to *LBA* and a new title, *Time Commando*.

Most important is the fact that Adeline are not content to rest on their laurels. They could have easily decided, as Frederic's ex employer, Infogrames, did, to stay with the winning formula and release many sequels to *LBA* using the original engine. But this is not Raynal's way. He, and the rest of the Adeline team, some coaxed from Infogrames, some, like lead coder **Serge Plagnol**, recruited along the way, have a more innovative agenda – if a game looks technically possible from the outset, it's not worth doing.

Frederic and Serge visited Bath to talk to **Edge** about projects past, present and future.

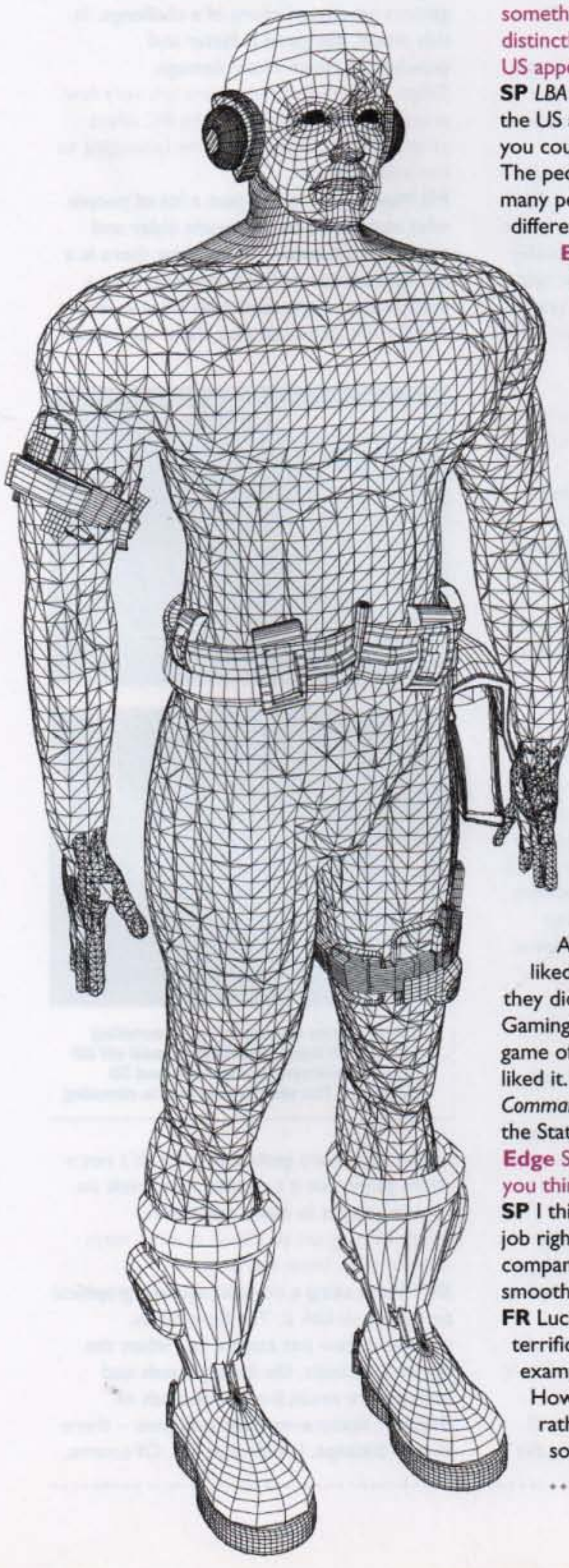


Edge Looking back at *LBA*, what do you think you've learned since then?

FR There were some big mistakes in *LBA*, like the save feature which auto-saved the game so the player never had to do the same thing twice. I still think it was a good idea, but we didn't explain the concept thoroughly enough, so a lot of people didn't understand it, and

didn't like it. In *LBA 2* you can save whenever you want, and wherever you are.

SP The only reason the autosave failed as a concept was because people have been taught that if you want to save you have to go to a menu and press save. That is how they expect games to work, so if you try anything new, people just get lost. I think if you showed the game to someone who had never played a videogame before, they wouldn't think anything was wrong.



Edge Given *Time Commando*'s gameplay has an arcade slant, it will probably gain more of an international appeal, something *LBA* lacked. Do you think *LBA*'s distinctly European flavour limited its US appeal?

SP *LBA* was actually called *Relentless* in the US and the sales figures were so low you could say we never actually sold it! The people who played it liked it, but not many people saw it. Maybe they want a different type of title there, I don't know.

Edge Perhaps in the US they don't like, or can't relate to, cute French characters…

SP I know there were loads of calls from EA in the US to make Twinsen [*LBA*'s lead character] into something different. They wanted a much tougher character; they wanted him to kick ass. But that wouldn't have suited the story.

FR Maybe that's why it didn't sell, because the Americans never understood what *LBA* was about.

SP On the other hand, the Americans who played the game liked it – no-one we've talked to said they didn't like it. Actually, Computer Gaming World, gave us 'best adventure game of the year', so someone must have liked it. However, I think, as you say, *Time Commando* will be much more successful in the States.

Edge So, which American developers do you think have the right approach?

SP I think Activision is doing a very good job right now. *Mech Warrior* is the company's best effort – it's a simple, smooth game that plays well for what it is.

FR LucasArts design very good games, with terrific scenarios – *Monkey Island*, for example, is very popular in France. However, the game engine they use is rather dated now, and that is something we wanted to avoid at



Adeline. When we started *LBA 2*, we agreed not to make a straightforward sequel. That's one of the reasons we left Infogrames – they just wanted a sequel to *Alone in the Dark* and we said, no, we want to add something new. If you spend a year basically remaking the first game – okay, it will sell on the strength of the original, but when it's released it will be so far behind other games being developed.

SP What we tend to say at Adeline is, if you want to do something and you already know how to do it, then don't do it. You've got to try to do something that looks impossible, you have to learn on the way. This happened with *LBA*, *LBA 2* and *Time Commando* – out of the three lead programmers there would always be one of us saying 'we can't do it, it can't be done', but the other two of us would say, 'don't worry, we'll try…'



At Adeline we have a policy – if we want to do something and we already know how to do it, don't do it

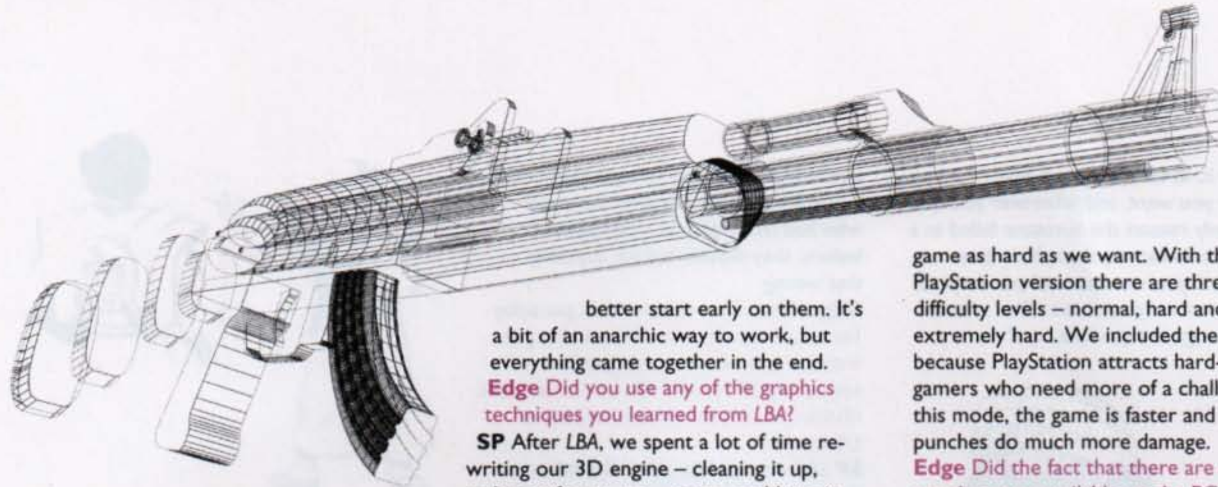
FR If you know exactly how to make the game when you start, the chances are, when it's ready to be released in a year's time, it will be out of date. When we were first talking about *Time Commando*, Serge suggested designing it like *Alone*, but with moving cameras. I didn't think it was possible.

SP But I was convinced we could do the streaming with 3D animation. Frederic thought that technically we wouldn't be able to get the streaming right. However, I believed it would work.

Edge Did you think it was a risk to use video pulled off CD? Most PC games that use pre-rendered graphics are, to put it bluntly, boring.

Continued next page

interview



Continued

FR With *Time Commando* we wanted to have visually stunning backgrounds and still use a moving camera, but that would not have been a feasible proposition in real 3D. At the moment, the PC cannot handle beautiful, full 3D games. The technique we are using instead is one that I thought about employing for *Alone 2*, but at the time it was impossible. Rest assured, we will be developing full 3D games soon.

Edge How did work start on *Time Commando*? Was it a case of finishing *LBA* and moving straight on to the new title?

SP No. The first thing we decided, after finishing *LBA*, was to do a sequel. However, we realised there was no way we could finish it in time for Christmas '95, and we wanted to have a game out at that time. So, we thought, let's do a quick, small, simple game and let's do it for Christmas. Hence, *Time Commando*. Fairly soon, though, at the end of Spring '95, we thought, 'no way – it'll never be ready for Christmas.'

FR We don't know how to make a small game. It is not in our repertoire.

Edge Why the delay? Did you just keep adding ideas?

FR Partly. Mainly, though, it was to make the game work. We got used to the technical aspects pretty quickly, but we wanted to create a real game with real gameplay.

Edge So, virtually no time was spent planning the gameplay before work was started on the graphics?

FR and **SP** No, zero!

FR Which may have been a mistake…

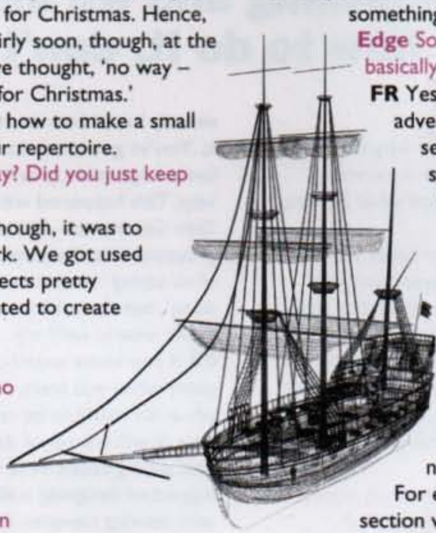
SP No, it might have seemed like a mistake, but I don't think we could have designed the game before starting work on the visuals – we really needed a graphical source to get the streaming right. Furthermore, we knew there would be so much work to do on the graphics that we'd better start early on them. It's a bit of an anarchic way to work, but everything came together in the end.

Edge Did you use any of the graphics techniques you learned from *LBA*?

SP After *LBA*, we spent a lot of time re-writing our 3D engine – cleaning it up, making it faster, etc – so we could use it for *Time Commando* and *LBA 2*. The animation has evolved slightly, but hasn't changed significantly, and we've also added texture-mapping code. Furthermore, we've hired a freelance to work on the assembly code who has made it run faster, but that hasn't changed the principles of the system.

Edge When you talked to **Edge** about *LBA* last time, you said you were heavily influenced by *Zelda*. It seems *Time Commando* is even more like a console game than *LBA*. Was that the intention?

FR Yes. Our objective was to test ourselves with a totally different style of game. At Adeline, we all like adventure games like *Zelda*, but we said to ourselves, why not try to make an arcade game, just to see if we can do it. We knew our approach to games is unlike a lot of other developers and we knew we could create something different.



Edge So *Time Commando* is basically an arcade game, then?

FR Yes, definitely. The only adventure elements are searching for weapons and sometimes learning how to use things. There will also be hidden sections that the player can search for, but these will probably be revealed in magazines, etc, at a later date.

The game will also include some nasty surprises and traps. For example, there is a section where, if you move a stick that's partially buried in the ground, it triggers a rock to fall on your head. However, if quick enough, the player can use this to kill the tiger who's prowling the area.

Edge Unlike PC adventures, most arcade games can be finished reasonably quickly. Is this be the case with *Time Commando*?

FR I can't really tell you, because that all depends on the tuning – we can make the game as hard as we want. With the PlayStation version there are three difficulty levels – normal, hard and extremely hard. We included the latter because PlayStation attracts hard-core gamers who need more of a challenge. In this mode, the game is faster and punches do much more damage.

Edge Did the fact that there are very few arcade games available on the PC affect your decision to write a game belonging to the action genre?

FR Maybe, yes. In the past a lot of people who had access to PCs were older and preferred adventure titles. Now there is a new generation of PC users who have a computer at home and who want a variety of different games to play. *Time Commando*,



Adeline's *Time Commando* gels scrolling rendered 3D backgrounds streamed off CD with light-sourced, texture-mapped 3D characters. The resultant effect is stunning

unlike adventure games, is quick. It's not a short game, but it's divided into levels so you can play it in quick, fun doses.

Edge Moving on to *LBA 2*, in what ways does it differ from the original?

SP We're using a completely new graphical technique in *LBA 2*. The flip screen, isometric view has stayed, but when the player is outside, the backgrounds and scenery are made from thousands of detailed, texture-mapped polygons – there are no bitmaps. It's all true 3D. Of course,



this would be terribly slow if the game actually moved in real 3D, so that's why we're retaining the flip-screen movement from the original. However, when the player changes the direction he is facing, he can hit a button and the new view is drawn up in realtime with texture-mapped polygon scenery.

The flip screen method allows us to use ten times more polygons than in realtime 3D games, because the 3D is rendered only when required. It actually takes about a quarter of a second to render, but the player won't notice it. Plus, there is no way, on a normal PC without hardware acceleration, that you would be able to have this character always in the centre of the screen with the camera moving all the time, and still have a high level of graphical detail in the background. Our method allows us to render ten thousand polygons per scene and create some beautiful images.

The flip screen method in *LBA 2* allows us to render ten times the polygons of realtime 3D games



FR With perspective-corrected textures and Gouraud-shaded polygons!

SP Furthermore, when you walk off the screen, the camera will remain in the same direction, although it will be possible to twist the camera to the same direction that Twinsen is facing. This is so the player cannot lose his sense of direction, which often happened in *Alone in the Dark*, because the camera would go 180 degrees from one frame to the other. We might also add an extra feature so you can just stand and look around like in *Mario*.

Edge Adeline's graphical innovations are obvious, then, but what about gameplay? Do you feel as though you are making advances in this area too?

SP *LBA 2*'s new 3D view has allowed us to add lots of stuff. The player will be able to drive vehicles properly, for example, and this will be an important element.

FR We've learned a lot from mistakes made by other companies and you can see that in *LBA*. I don't like adventure games where you need to randomly try all objects you have in your inventory to perform a specific task. For example, in *AITD3*, there is a section where you have to open two identical doors. One of them can only be opened with a pass card whereas the other one can be shot through…

SP …but that doesn't make sense. If you can open one door with a gun, why not use it to open the other one? That's something we wanted to avoid – it just makes the whole game totally illogical. In *LBA* we tried to make sure all the objects have a logical, clear use.



FR At Adeline, if we get sick of a game, but believe the engine is worth doing something with, we might as well license it out to another company. We don't want to waste our time writing a sequel unless we have extra things to put in it. With *LBA* we were still coming up with ideas for the game when it was too late to implement them, so these went into the sequel. However, if there is a third installment to do and we don't feel like doing it, we can license out the engine, but still put our name on the product.

Edge What about the future? will you be using any of the new PC graphics cards?

FR On the next game perhaps.

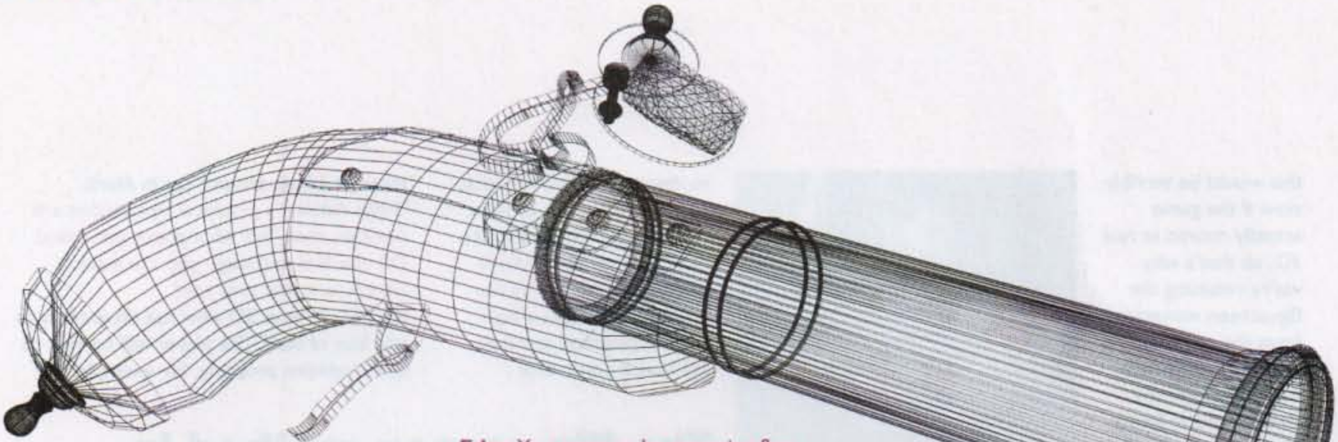
SP We have been approached by several 3D card companies, initially by Creative Labs with their Glint chip. What we saw was a very early version of the hardware and we thought it was cool in parts, but we didn't like the API and they didn't want to release low-level information at all. In the end we thought, 'oh well, too bad. Let's wait.'





Adeline has subsequently been approached by other companies, but we didn't want to go along with any of those

Continued next page



Continued

boards. There are just too many of them and it's going to be exactly the same mess it used to be with sound boards. We do need an API, though, and I've been looking at quite a few. The *3DR* libraries from Intel look quite impressive, but they belong to Intel, so only run on Intel chips. This has so far proved a bit of a problem with Microsoft. However, Microsoft are now developing *Direct 3D*, which looks quite promising. I still have to see what it is putting in it though, because right now, *Direct 3D* is just a name. I'm hoping to get a beta version soon.



Edge How do you think these new cards will compare to the consoles in terms of 3D capabilities?

SP I'm sure we'll see something at least as good as PlayStation.

Edge With z-buffering?

SP Z-buffering is not always a good idea, it just takes a lot of CPU bandwidth and a lot of memory. People have usually got very low memory on their video board and they are not going to buy an extra two megs, right now, just for gaming. It's too expensive. In fact, we never use z-buffering – it's really just a brute force technique. I think with smart algorithms you can find acceptable ways around it.

FR When every graphics card can do it, then perhaps we'll use it. However, we are waiting for *Direct 3D* so it'll be possible to create games without having to worry about cards. Of course, we'll use our polygon engine for the PC because it's a really fast engine, but if there is a 3D card in it, we'll pass through *Direct 3D* to speed it up.

SP The risk with *Direct 3D* is that it may only support the features which each graphics card has in common. This would mean that, if there was an outstanding extra feature on just one of the boards, it would not be supported. We'll see. But obviously 3D boards are the way to go in the future.

Edge You seem to be managing fine without 3D cards at the moment. Are you reaching the limits of what you can do?

SP I don't think that's the right way to look at it. Frederic has always designed games according to the machines' capabilities at the time. If we had polygons that we could shuffle around in realtime at 60fps, we'd do something different. However, no matter how good your polygon engine is, it doesn't make a game. You can create a very good game in low resolution or even with text.

FR The problem is, journalists are waiting for technological advances and players are waiting for good games, and you need to take both into consideration. If you want journalists to write about your game, you have to show off the technical specs.

Edge What about consoles, are you just working on PlayStation?

SP At the moment, yes. We started on Saturn, but gave up because we realised if we wanted to remain a small team we would have to concentrate on just one console platform. In the end, we felt PlayStation was a better bet – it has a very clean hardware design, so it's very straightforward to program. Saturn is a good machine but it seems like a rush job – Sega saw the competition and suddenly decided to include another CPU.

Edge What about Nintendo, how do you feel about what they are doing?

SP We went to last year's Shoshinkai and had a briefing on the N64 hardware, which looked very promising. The only problem is its lack of CD-ROM drive, something I think buyers expect now. At the same time, though, this is a Nintendo machine and Nintendo has always had a very good reputation for gaming. The cartridge is still a bit of a problem. U64 has so much power, you can feed a massive amount of information into the chip – it can process a lot. However, because of the cartridge limit, we might not be able to make as much out of the chip as we could. But maybe everything could be done in realtime with no pre-rendering.

Ultra 64 is balanced in exactly the opposite way to the PC. The PC has got lots of memory but, generally speaking, quite a low CPU bandwidth, because you have to do everything with just one chip. With Ultra 64, you have a huge CPU bandwidth, but very little memory, so it's designed from the other perspective.



Edge In terms of design, *LBA* and *Time Commando* are highly original, which is something Nintendo is trying to achieve with its N64 titles...

SP Nintendo called us because of Miyamoto. He wanted us to work on N64 as soon as it would be possible. Right now we can't afford the time because we have to finish *Time Commando* before we can start work on Ultra 64. We haven't been given development kits yet – Nintendo offered us one, but I turned it down because we didn't have any time to look at it. We want to keep a good relationship with Nintendo, but we can't place our projects in jeopardy.

Edge On the subject of 64bit consoles, have you considered developing on M2?

SP They haven't contacted us, so all we know about M2 is what we've read in **Edge**. We tried to arrange a meeting with The 3DO Company, but, so far they haven't got back to us.

Edge Doh!

Silicon Graphics are renowned for their unrivalled CG technology. After setting a benchmark for high-end image generation with its Onyx Reality Engine², the company has created a machine 100 times more powerful

Reality synthesiser

Technology:	**Graphics workstation**
Manufacturer	**SGI**
Release:	**end Q1 96**
Origin:	**US**





Yesterday's technology: SGI's Onyx RE²-powered Fantasy 500 (top) and Namco's Hornet-1



SGI's new Onyx InfiniteReality – an incredible nine billion floating point operations per second. Unfortunately, it starts at a cool £179,000

Onyx InfiniteReality, Silicon Graphics' latest graphics supercomputer, was unveiled in the UK at their headquarters in Reading recently. The centrepiece of the new equipment's demonstrations was a realtime mountain fly-by utilising geospecific data generated from remote-sensing satellites accurate to a resolution of one metre. It was a spectacular sight.

'The performance leap to InfiniteReality is the greatest jump from one generation to the next in the history of the company,' comments Greg Estes, SGI's Product & Technical Marketing Manager for their Advanced Systems Division.

The specs for InfiniteReality, which will ship by the end of the first quarter, are equally impressive. Silicon Graphics claims it's approaching a performance 100 times faster, in the area of complex visualisation applications, than the Onyx RealityEngine², previously the fastest graphics workstation on the market. The preliminary figures available state InfiniteReality's custom geometry engine processors will deliver upwards of ten million polygons per second while parallel pixel processors produce a pixel-fill rate of up to 800 million textured, anti-aliased pixels per second. This compares with the RE²'s sub two million polygons/sec performance and a peak display of around 230 million textured, anti-aliased pixels per second.

Estes further clarifies the performance figures by stating that IR is between five and 100 times faster than the RE². 'The low side might be for things like drawing simple non-textured polygons,' he says, 'and the high side would be in the area of complex multi-dimensional data like viewing volumetric CAT-scan data interactively in 3D for medical imaging purposes.'

Performance enhancements have been further bolstered by the integration of MIPS Technologies' R10000 RISC microprocessor across the Onyx family. Previously, high-end Onyxs were driven by the 250MHz R4400 processor, but the new silicon offers a 1.5 to two-fold performance increase for large integer calculations such as databases and for floating-point intensive applications (which includes graphics rendering) – a claimed two to three-fold speed increase over the R4400. Onyxs based on the 200MHz R10000 offer from two to 24 processors and deliver a peak performance exceeding 9GFLOPS (nine billion floating point operations per second).

Naturally, amongst all these large numbers the price is impressive too. An Onyx InfiniteReality system based on the R4400 starts at £179,000, while the minimum two-processor R10000 configuration is a snip at a starting price of £188,000.

It's a heavy price to pay, so SGI have been careful to work closely with software developers and other major users to maximise the impact of InfiniteReality when it hits the marketplace. Chief amongst these is,

Tech specs

Memory: ECC protected, 64Mb–16Gb with 1–8 way interleaving
Number of antialiased vectors per second: over ten million
Number of triangles per second: over ten million
Number of smooth, z-buffered pixels per second: 200–800 million
Number of textured, anti-aliased pixels per second: 200–800 million
Number of trilinearly interpolated pixels per second: 200–800 million
32bit z-buffering: yes
Colour output: 48bit RGBA
Number of colour planes: 192
Number of overlay/underlay planes: 192
Maximum bits per pixel: 256–1024
Texture memory: 16 or 64Mb
Frame buffer size: 80–320Mb
Display: VGA to HDTV (non-interlaced)

naturally, the Silicon Graphics-owned Alias/Wavefront, whose complete suite of tools should benefit substantially.

Estes: 'There have always been elements of both the Alias and Wavefront code that use the realtime graphics capabilities, and some elements that use software rendering. I expect this trend to continue, but I believe as the quality of realtime rendering gets better and better, customers will push for an increasing amount of realtime capabilities.'

Other interested parties also include Accom, whose Elsett package is a market leader in the burgeoning virtual broadcast market; the Cambridge-based Cadcentre; and the military flight simulation specialists Hughes Training Inc. Indeed it's now the defence/classified area that's a major driving force behind the ongoing development of graphics technology.

'It's an interesting phenomenon. There's a sort of cycle that goes on between the entertainment industry and the military,' explains Estes. 'Sometimes the military drives our technology but the entertainment industry ends up using it in various forms, and vice versa. We're currently ending the entertainment-driven cycle and are finding the military is requesting features which may well be used in entertainment fields.'



Incredibly, these shots are realtime images generated by the Onyx IR. The Matterhorn (top) was accurately rendered using geospecific data

One of these new features, geospecific texturing, as demonstrated at Reading, is a good example of a military application that translates well to the entertainment industry. Allowing the realtime correlation of terrain and elevation data with aerial or satellite photographic data, it enables specific environments to be created rather than generic ones.

'You'll start to see games where you fly over London rather than some made-up city. I think things will get really interesting when you fly over London in 1942, or, say, Cuba in 1961 during the missile crisis.'

Concurrently processing graphics, imaging and video data in realtime, InfiniteReality is also capable of downloading 200Mb/sec into the visualisation pipeline. 'The faster video and texture pathways in the system mean we can write multiple video streams into texture memory in realtime. This yields incredible effects as streams of live video become just another data type to be manipulated in a virtual world. In other words, we're now processing digital video as fast and in the same way as we have been able to process graphics.'

Coupled with IR's capability to drive immersive visualisations and telepresence operations for up to four simultaneous users in stereo, or eight in monoscopic mode, this should lead to some applications that will quickly eclipse previous Onyx-driven entertainment simulators such as Namco/Magic Edge's Hornet-1 or Disney's Magic Carpet ride. But will software houses developing for platforms way below SGI's level actually buy it?

It seems so. Developers seem enthusiastic, particularly over the potential for building complex models without worrying about processing overheads. Inevitably, even for those unwilling to upgrade, faster processing time – whether enabling realtime graphics generation or speeding up batch-rendering and the cleaning up of motion capture data – will lead to the greater inclusion of leading edge effects in software.

According to Estes, only about one percent of Onyxs are used as rendering servers – mainly the province of the Challenge and Power Challenge series – with the rest generating realtime graphics. That could soon change.

'Interestingly, in the future you should expect to see the Onyx IR being used as a graphics server. We've developed some code that allows for remote viewing of realtime rendering.' Surely *Pilotwings IR* would be far more interesting...

The graphics performance leap to InfiniteReality is the greatest jump from one generation to the next in the history of the company

Greg Estes, **SGI**

FI

Format: **PlayStation**
Publisher: **Psygnosis**
Developer: **Bizarre Creations**
Release date:**July**
Origin: **UK**

Consoles don't lend themselves easily to authentic simulations. Psygnosis addresses this drawback with a potent cocktail of arcade thrills and FI realism





Without a doubt the hardest thing about designing a sim is getting hold of accurate information. With the amount of money and high technology involved in formula one, teams are very sceptical about letting their information go. It's taken nine months of gentle persuasion to get the information we have, and still we can't name our sources! Thus spoke **Martyn Chudley** of Bizarre Creations, creators of Psygnosis latest racing title, *F1*.

Wipeout was too difficult. That's the feedback Psygnosis has received since their stylish racer premiered six months ago. One would think that the company, when preparing to start another racing title, would look toward the immediacy of *Ridge Racer* or *Sega Rally* as inspiration. Surely a Formula 1 simulation would be the last thing on the designers' minds?

However, as **Edge** revealed last month, an F1 simulation is exactly what Bizarre Creations is working on.







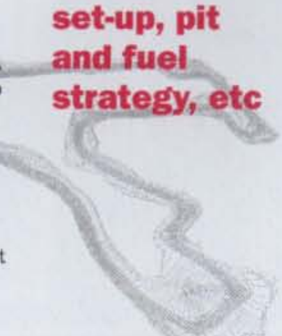
By securing the Formula 1 license, Psygnosis and Bizarre Creations have been able to include all the stars of the '95 F1 season, as well as accurately modelling each construction team's car and all 17 circuits from the official agenda

The team hasn't taken the challenge lightly. Procuring an official license, thereby guaranteeing the presence of all 13 construction teams, 35 drivers and 17 circuits from the '95 season, was a definite statement of intent. As was designing the circuits and the cars around complex reference materials to ensure unparalleled realism.

But BC insist *F1* is not solely a sim. There is an advanced mode with options like car set-up, and pit and fuel strategy, but the emphasis is placed firmly on the coin-op style 'arcade mode' where the player doesn't have to worry about all that.

So why expend all the effort on making *F1* painstakingly accurate if

The emphasis is placed firmly on the coin-op style 'arcade mode' where the player doesn't have to worry about car set-up, pit and fuel strategy, etc





the sim aspects are secondary? 'The realism is there because the F1 license was so expensive we wanted to make the most of it,' admits Psygnosis' **Glen O'Connell**. 'Furthermore, loads of games waste their licenses. We hate that. We wanted to create a game that would truly exploit ours. We have had dozens of positive emails from people who have seen screen shots in **Edge** and have praised our accuracy. That's very important to us. By ensuring authenticity as well as playability we're reaching a far wider audience.'

Apart from the sim stigma, there are other problems with creating a realistic *F1* title. For example, because the locations in games like *Ridge Racer*, *Sega Rally*, etc, are fictitious, the designers can include sharp bends and steep sides to avoid 'draw distance' problems – specifically the pop-up effect which occurs from having to draw in complex scenery at as late as possible to avoid slow down. In *F1*, though, the circuits are accurately based on real circuit data, meaning designing tracks to avoid problems was not an option. Of course, the F1A didn't have to worry about draw distance when they built the F1 circuits; what they needed was long straight sections and flat plains – the antithesis of videogame requirements.

To compound these problems, PlayStation adds a few of its own – namely the lack of z-buffering abilities and its infamous habit of smearing polys as they reach the screen's edges.

Bizarre Creations coped with all this by treating the cars, circuits and scenery in entirely separate ways. Take vehicles, for example. To counteract any slowdown that may result from having to display loads of polys on the screen, due to the long straights, Bizarre wrote their own modelling utilities which assist PlayStation's own libraries. To keep the game fast, the artists working on the cars were taught how PlayStation copes with processing and handling polygons, textures and colours, so that they could create vehicles with a smaller amount of polys, but with little loss of detail.

Consequently, the cars are drawn in two modes – high and low detail. As Chudley says, 'At a distance on a straight we found you couldn't tell the difference between the two models. So, when the cars pass beyond a set distance, they drop to the low version.' The difference between the two is substantial – high detail cars have 450 polys, low detail have just 100. To disguise the effect, all the cars remain textured and Gouraud shaded.

The old z-buffer difficulty has been solved by building scenery models with the lowest amount of overlap. For example, if there's a section of the track where a wall stands in front of a hill, the hill graphic can be snapped



Mad Katz's PlayStation-specific stearing wheel will be supported









***F1* caters for the now obligatory number of in-game views. For the panning view (top right), the cameras are in exactly the same place as the BBC's would be if televised**

The voice of Formula One

In-game commentary is becoming a popular element of the sports sim, and, as disclosed last month, Psygnosis have secured the services of 'the voice of Formula One', **Murray Walker**.

Murray was actually furnished with over 20 pages of script and his total commentary runs to an hour in length. One thing Bizarre wanted to avoid was the repetition that's been found in other sports sims. Therefore, phrases can be linked together to create very specific sentences instead of general comments repeated over and over again.

But what was he like to work with?

Chudley: 'Murray is a true professional, and a nice bloke! After having spent a few hours getting to know the game, he really launched himself into the commentary. We had a 25 page script to get through, with three excitement levels for each phrase, different ways of commenting on each occurrence and starting and finishing summaries. Murray just sailed through them with his characteristic excitement as if he were at the circuit watching the real thing.'





F1 commentator Murray Walker has recorded an hour of dialogue

Sound FX

Bizarre Creations have gone to extraordinary efforts to ensure the car engine noises in *F1* are authentic. In fact, to create genuine in-car sound effects, a DAT recorder was physically strapped to a driver's body whilst he raced around a test track. The results have been sampled and incorporated in the game.

Furthermore, external recordings have been taken from the trackside as well as pit lanes. Such efforts should ensure *F1* is a sonic treat

Continued next page







In arcade mode crashes like this (left) won't end the race. Advanced mode is not so forgiving, however

Continued

The cars are drawn in two modes – high and low detail. For speed, when the cars pass beyond a certain distance, they drop to the low version

forward to merge with the wall instead of ending behind it. In other words, the two are actually treated as one object, cutting any need for z-buffering and therefore keeping the game to speed.

To combat polygon smearing, Bizarre employ the tried-and-tested meshing method, which subdivides and redraws the polygons closest to the edges of the screen. To supplement this, though, the track, where most smearing problems occur, is actually rendered using a different method to its surroundings. **Sarah** from Bizarre elaborates, 'The combined Silicon Graphics track and scenery model is loaded into our in-house world editor, which separates the two, and outputs them in two different formats. The track is then stored in a way which facilitates separate clipping and meshing routines. In this way the thresholds for the draw distance and meshing of the track can be considered independently from the scenery.'

These techniques work well. The game processes and draws between 4,000 and 6,000 polygons per second at a frame rate of 30fps. This means there's an average of 150,000 textured polys per second flying about the screen and yet, even when there are several cars on screen, there is no slowdown. Chudley doesn't take all the credit for this: 'PlayStation copes very well with having lots of cars at the same time – better than most other platforms. You can happily have all 26 cars on screen at once (eg at the start of the race), with the most distant being rendered in low detail, and the game usually stays in two frames.'

A general problem with creating driving games is getting the AI right in the computer-controlled cars. As Chudley says, 'we have seen other games where the cars are all following a set path and get confused when the pattern is disrupted. Others have a single dynamic model for the AI, meaning all the drivers have the same style. We tried to avoid AI like this, providing the driver with a real race.'

The AI in *F1* basically works on two levels. Bizarre Creations has begun from the standpoint that every driver wants to win – therefore each one has been given the decision making capability to run his own race and constantly look for ways to improve his situation. During the race, the player's opponents are continuously assessing their surroundings, analysing the situation and making decisions on speed, path, etc. The game includes a pool of strategies drawn from real race footage (eg slipstreaming until the path is clear and then moving to

There's an average of 150,000 textured polys per second flying about the screen and yet, even when there are several cars on screen, there is no slowdown



On the starting grid all 26 cars are visible. Even so, Bizarre's clever 3D engine prevents any slowdown once the drivers are given a green light





The 3D models were first created on SGI and then imported to PS

overtake) which is dipped into by all computer-controlled drivers.

On top of this, though, every driver has a set of parameters which can be altered to give each a 'personality'. Some are polite and will move over if the player is faster, others will do everything they can to get in the way.

Another thing that Bizarre has noticed about racing games is that often the computer-controlled vehicles are infallible. 'In *Wipeout*, they never get the corners wrong,' argues Chudley, 'which wouldn't be acceptable in a Formula 1 game.' Consequently, the computer opponents sometimes drive over rumble strips, go wide on corners and get involved in collisions. Everyone has the capacity for error.

That's all fine in theory, of course, but how will it translate into gameplay? One of **Edge**'s main worries about *F1*, before getting a look at a playable version, was that there would not be significant handling difference between the arcade and advanced modes. Luckily these fears seem to have been unfounded. The arcade race, judging by a very early demo, is a truly coin-op style knock-about. Crashes only result in a few seconds of delay, and the car can approach corners at ridiculous speeds without spinning out of control. In advanced mode, however, one serious crash and the player is out of the race. Corners have to be treated with respect – even with auto transmission selected, significant control skills are needed to stay on course. In fact, the whole handling of the car feels different, even on straight sections.

Despite this gameplay diversity, *F1* could be a gamble for Psygnosis. F1-style games are more commonly associated with accurate and complex simulation than gripping gameplay. That's all very well on the PC, but PlayStation caters for a different audience, used to flashy arcade-style racers. Can the promise of a cut-down arcade mode attract the non-sim heads to a previously sim-like genre?

On the other hand, though, there hasn't been a decent F1 game on the consoles since *Virtua Racing*. If *F1* is good enough, and it definitely looks so at the moment, it could both reanimate and corner the market in one swoop.

The driving force behind *F1*

Working for Psygnosis for several years, producing titles such as *Wiz 'n' Liz*, *Fatal Rewind* and *The Killing Game Show*, Martyn Chudley is now leading Bizarre Creations in their development of *F1*.

Edge How will *F1* compare to Microprose's two *F1GP* games?

MC I don't think anyone can claim to have bettered Geoff Crammond's six or so years of constant work to perfect his simulation. *F1* is a different type of game, aiming to appeal to a wide gaming audience rather than just the simulation player. Yes, our 'advanced' mode cars do handle like the real thing, but if you want to pick up a racing game and play, the 'arcade' mode caters for the less technical audience.

If we have bettered *F1GP* in any way, I think it would be in our attention to detail. We have had five artists working full time on modelling the game elements to precise detail, with huge amounts of reference material. We think the circuits are as close to the real thing as you can get.



The Bizarre Creations team, based in Liverpool, were hand-picked for the *F1* project (team leader, Martyn Chudley, left in picture)

Edge Just how accurate is the track and car data?

MC The tracks are modelled from the official surveyors' circuit maps and data. Visual reference also comes from over 100 hours of video footage. The track layout is put into a specially written editor, where the accurate heights and dimensions can be applied to start off the 3D model. Then we add barriers, rumble strips, run-off areas and trees to form an accurate but bare circuit.

Next, this model is loaded into *Softimage* on Silicon Graphics machines to model all the buildings and more complex details such as TV cranes, pit facilities, large screen video displays, etc. All the individual objects are modelled by hand – it's time consuming, but looks authentic.

As for the car models, these are again taken from the official information supplied by FOCA – the Formula One Constructors' Association. We also have plenty of photographic reference, some taken ourselves, some from people in the Formula One industry, to show the cars from every angle. Consequently, all the models in the game are unique in design, they're not just the same models with different colours pasted on, like in other racing games.

Edge What has it been like to work with all the different parties involved, as in all the various F1 teams, etc?

MC Some have been great – helpful and friendly – both on an official and an unofficial level. Some haven't been as generous as we would have liked, but you can't have everything!

Edge Will the engine be used for future racing games?

MC All the code has been written with future projects in mind as well as *F1*. The 3D engine is constantly being updated, but it can also be used for future products. As to more games in the pipeline, we can't really say at the moment. Bizarre Creations were half way through an interactive concept produced for PlayStation, but *F1* took priority. Code-named, 'Slaughter', this game will be back on the agenda soon.

Die Hard Trilogy

The action-packed Die Hard movies are near-perfect for videogame conversion. Fox Interactive prepares to cash in on another famous trilogy







Three games in one – a good deal or merely a shallow compilation?

Format: **PlayStation**
Publisher: **Fox Interactive**
Developer: **Probe**
Release date: **June**
Origin: **US**

It says something of Fox Interactive's naivety about this business that they should release all three *Die Hard* games in one package and expect gamers to be impressed. Of course the pitch will be 'three games in one – a bargain!' Commonly, what this actually means is 'three games in one – none of them are any good and we thought no-one would notice if we put them all together!'

Cynicism aside, the three games that make up this trilogy (based on each of the films) do look rather interesting. The first, set in the Nakatomi Plaza, is a free-scrolling shoot 'em up reminiscent of *Lone Soldier*, except with the camera above and over the shoulder of the Bruce Willis character, rather than behind him. The aim is to start on the lowest level of the building and work up to the penthouse on the twelfth floor, killing terrorists and saving hostages along the way. Actually, that's pretty close to the film story – the character in the game even has bare feet.



The second stage of the trilogy has close ties to Sega's *Virtua Cop*. The *Die Hard* version, however, seems to have slightly more diversity





Die Hard 3 (above) steals the movie's incredible car chases through New York

The *Die Hard 2* game is a *Virtua Cop*-style shoot 'em up, set in various areas of Washington airport. Apparently it will be possible to shoot people in the departure lounge, baggage reclaim, and duty free shop, as well as the runway, at least giving some diversity to a staid genre. Visually, this one's very impressive with highly-detailed backgrounds and well-animated characters.

Curiously, *Die Hard 3* is a kind of urban driving game, where the player has to drive around the city in order to locate bombs placed by terrorists. Again the game looks impressive, with much vehicle-smashing potential.

As these games are based on the compelling movie trilogy, success is almost guaranteed. Whether they deserve this is another matter – it's likely the decision was taken that each game wasn't strong enough to go it alone and Edge only hopes the result isn't a mixture of lukewarm disparate game styles. Whatever the case, it'll surely sell by the truckload.





Expect the clichéd exploding canisters in *Die Hard Trilogy* (top)

Final Fantasy VII

With Nintendo's 64bit console ousted by Sony's PlayStation, Square Soft have switched formats and dimensions for Japan's premier RPG series



***Final Fantasy VII* disowns its 2D overhead ancestory for pre-rendered 3D scenery, adding much to the graphical realism of Square's epic**





Format:	**PlayStation**
Publisher:	**Square Soft**
Developer:	**In-house**
Release date:	**Dec (Japan)**
Origin:	**Japan**



Purely by the nature of their epic storylines Japanese RPGs demand a lot from their host medium, not least of which is a large storage capacity. Not surprisingly, when Nintendo allies Square Soft demoed the results of their 3D experiments at Siggraph last year it seemed impossible to squeeze so many complex realtime graphics and a game stretching thirty hours plus into N64's relatively small 64Mbit (8Mb) cart. In the end, it was.

The recently released pictures show the ambitious level Square were aiming at, and just why they've been forced to forego N64's technical innovation for the immense storage capacity of PlayStation's CD.

FF VII takes a familiar formula and marries it to a mix of realtime and pre-rendered 3D graphics. Although they can now be viewed at a variety of angles, the battles are still turn-based with the familiar menu system evident. Elsewhere it would seem settings and locations have realtime characters inhabiting a pre-rendered environment.

So far three characters have been announced. A spiky-haired swordsman – Claud, a staff-wielding heroine – Ealis, and a muscle-bound heavyweight with a gun for a hand – Barret. Unfortunately, when transferred to polygons much of the charm and design work that has endeared Square's past characters seems to have been lost. Original *FF* character designer, Yoshitaka Amano, has not been involved in this new project and **Edge** can only hope the huge space Square now have at their disposal is filled with the same care and attention to detail afforded to their 16bit projects.

The Western version of PS *FF VII* should appear sometime in the first quarter of 1997.





The lush pre-rendered backgrounds look exquisite, but will Square retain the depth of playability that made the 16bit series famous?







Although in 3D, the fight scenes follow traditional gameplay

Jumping Flash 2

Format:	PlayStation
Publisher:	SCE
Developer:	In-house
Release date:	Spring (Japan)
Origin:	Japan





The sequel retains *Jumping Flash*'s unique, highly colourful look

When *Jumping Flash* came out last year, it was the only 32bit game to really take hold of an established genre and shake it up to produce something a bit different.

Sadly, it still is.

JF2, it seems, seeks to reiterate the successful formula of its predecessor and add to a few key areas. The original's colourful, but basic, graphics have been improved with complex settings and scenic objects. One level even features an impressive rain effect, where it will be possible to dive into the water.

As for gameplay, it looks as though little has changed. Robbit, the robotic rabbit in the first installment, is back, except now his tricky three step jump can be carried out with the help of a three stage gauge display.

Some new characters are rumoured, including the mysterious Captain Suzuki, but as the game is only 50% complete little has been announced. Hopefully, the designers have added something to the game itself, rather than just the appearance. It would be ironic if PlayStation's one offbeat title should be given an exact replica for a sequel.





Jumping Flash 2 offers a new level of scenic detail and a new 'widescreen' mode (above)



The game features a new gauge display to make high jumps easier

Motor Toon GP 2

Format:	PlayStation
Publisher:	SCE
Developer:	In-house
Release date:	TBA
Origin:	Japan





The imaginative and oddball car designs remain distinctive

The success of *Micro Machines* made sure there would always be room for a slightly offcentre racing game in any platform's software library. *Motor Toon* was the PlayStation's first dalliance with that sub-genre.

However, due to its flawed vehicle handling, the original *Motor Toon* was never released outside Japan. The game was by no means a complete failure, though. The surreal, colourful circuits and wacky cartoon vehicles lent a unique quality compared to po-faced contenders *Daytona* and *Ridge Racer*. All a sequel would have to do, therefore, is redress the original's fatal flaw and add a few new features.

MTGP 2 includes bombs, missiles and controllable turbo boosts, all absent from its predecessor. As for improved handling – time will tell. If the designers get it right, *MTGP 2* may provide a welcome antidote to the more serious racing games currently being touted.





Spinning out of control (above). This shouldn't happen too much in *MTGP 2*



Motor Toon 2 retains the original's surreal, cartoon landscapes but adds texture-mapping

Gun Griffon The Eurasion Conflict

Format: **Saturn**
Publisher: **Sega**
Developer: **Game Arts**
Release date: **March**
Origin: **Japan**





Prepare to hear the sound of robots engaged in futuristic mission-based warfare

Washing in on the twin Japanese obsessions with robots and apocalyptic futures comes *Gun Griffon* – a robot warfare game set on an ecologically-ruined earth where four superpowers, Europa, America, Asian&Pacific and Africa endlessly tussle for global domination.

For protection, each superpower has developed its own guardian robots known as AWGSs, of which 'High Macs' are the ultimate models. These robots, one of which the player takes control of, are combination tanks and helicopters. They are able to fly for a limited distance at a time and their top halves can turn through 180 degrees to counter attack from behind.

Gun Griffon is split into eight, mission-based stages, with the player changing international allegiances as time passes. So far only a few have been announced – on the 'Fox Hunt' level the player must attack a railway convoy, whereas in 'Dark Servant' a raid occurs on Kiev. It's basically a first-person shoot 'em up in the *Thunderhawk 2*, rather than *Doom* style.

Developer, Game Arts, was previously responsible for the Mega CD title, *Silpheed*, a graphically impressive polygon shoot 'em up. It definitely looks as though the company's concern with visual finesse has not waned – *Gun Griffon* includes some gorgeous vehicles and well-defined background scenery.

If there's a good game hidden beneath the aesthetics, this could be Japan's combined answer to *Mech Warrior* and *Thunderhawk*. Thankfully, a European release is almost certain.





The targeting looks impressively complex. As does the radar

Legend of Thor

Format: **Saturn**
Publisher: **Sega**
Developer: **Ancient**
Release date: **TBA**
Origin: **Japan?**







The landscapes are colourful and detailed, and the top-down view is a welcome change



At the moment, what Saturn needs is a little game diversity and some quality output from third party developers. *Legend of Thor*, sequel to the Mega Drive title *Story of Thor*, promises both.

Legend is a top-down arcade adventure in which the player takes on the role of Leon, a warrior who must carry on an ancient family feud. The Saturn version will include many of the familiar features found in its 16bit predecessor, including the same weapons, combat system and ability to jump out of and into fights. There will also be plenty of traps and puzzles, giving the game an RPG feel, and some quality sonic orchestration from game music supremo Yuzo Koshiro.

Legend of Thor also features a large cast of benevolent NPCs including Shade, who can clone Leon and so draw attackers away from him, Efreet, who spits flames at enemies and, bizarrely, Bawu, a carnivorous plant who digs into the ground and then eats people.

With *Legend*'s sumptuous backgrounds and large sprites, as well as its non-formulaic gameplay, it should give Saturn owners a worthwhile break from Sega's endless reel of arcade releases.



There are many NPCs – a simple combat system allows them to be killed more easily

Conquest of the New World



Conquest's rendered intro is cleverly crafted

Format:	**PC CD-ROM**
Publisher:	**Interplay**
Developer:	**Parallax**
Release date:	**April**
Origin:	**US**

After a largely unsuccessful period of trying to emulate console titles, disheartened PC developers have rediscovered that old faithful of the PC world, the strategy game.

Interplay's effort, *Conquest of the New World*, looks frighteningly close to Sid Meier's *Civ* spin off, *Colonization* – the player takes on the role of a group of pilgrims who seek to set up a colony in the new world, either trading with, or destroying, native tribes and other prospective colonies along the way.

Conquest does have a few of its own merits, though. The isometric layout is pretty (especially the busy town displays) and, judging by the early demos, play looks to be deep and involving. Especially promising is the fact that you can centre on individual elements of each town – mills, mines, etc, and assess their productivity in a very detailed way. In this respect, building the colony looks to be less luck than it was in *Civ*.

Also impressive is the intuitive menu system and an inbuilt network option. Even if this game does look like a *Colonization*-clone, there are at least the foundations of some very interesting touches.





The busy colonies look exquisite (top). Battles follow strict strategy protocol (above)

Destiny



Being *Win '95* native, lots of menus are used

Format:	**PC CD-ROM**
Publisher:	**Interactive Magic**
Developer:	**Dagger**
Release date:	**May**
Origin:	**US**

According to Adrian Earle, the designer of *Destiny*, Interactive Magic's head man, 'Wild' Bill Stealey, has decided the future is 3D and therefore all IM titles must now comply to this visual approach. Even, unbefitting as it may seem, strategy games.

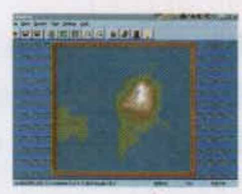
Destiny is a kind of 3D *Civilization*. The player evolves his tribe from the stone age to the space age, starting wars, trading and making scientific discoveries along the way. The pitch is, *Destiny* is *Windows '95* native meaning play occurs through a series of user-friendly menus. In addition there's the in-vogue network option and the choice to play out mini-scenarios which limit players to one time period: a neat feature for the god-complex sufferer in a rush.

As for the 3D – very early demos of the game don't really convince that this is a necessary part of the action. It is even possible to zoom out of the 3D view and into an overhead 2D map, where it actually looks like most of the tactical decisions will be made.

Perhaps the final version will reveal a purpose for 3D that isn't yet apparent. If not, a potentially compelling game will be marred by a 'jump on the 3D bandwagon' approach which, as *Conquest of the New World* shows, is unnecessary.



As the player becomes advanced, a growing 3D image of the town is shown





Destiny can be viewed from a large selection of altitudes and angles





An in-depth, first person view is also selectable



Bullfrog team (above) and *Dungeon Keeper* (below left)

Format:	**PC (shown) /Consoles**
Publisher:	**Electronic Arts**
Developer:	**Bullfrog**

Bullfrog

No matter how far the games industry advances, Bullfrog is always one step ahead of the competition. **Edge** visits the development team that invented god



Populous, Syndicate, Magic Carpet. Bullfrog's history is one characterised by innovative and intelligent products. The god game, a quintessential videogame genre, was virtually invented by Bullfrog's founder and managing director, **Peter Molyneux**, and has remained a staple part of Bullfrog's output ever since. Not that the company has become lazy by merely repeating its successes. Bullfrog's new titles show a broad spectrum of products all of which update and explore the strategy game in a variety of ways.

Dungeon Keeper, the title Bullfrog will be releasing first, clearly emanates from Molyneux's love of role playing games – not the disciplined Japanese console versions, but the real dice and paper things people used to play before videogames came along. However, both he and the title's lead programmer, **Simon Carter**, have noticed that videogames based on RPGs have become rather staid over the last few years.

Dungeon Keeper takes the basic RPG premise – hero raids dungeon, battles evil creatures and steals treasure – and simply reverses the familiar roles. Here, the player is the dungeon keeper, the evil creatures are his minions and the heroic adventurers his enemies.

The game is basically about dungeon management. The player must use gold to buy various extensions to his dungeon (torture chambers, living quarters, etc), and to create different creatures who will then

guard the passageways. All the while, heroes are trying to gain access to the player's stronghold so they can loot the gold and put the player out of business.

In order to extend the gameplay beyond pure strategy, *Dungeon Keeper* can be switched between two display modes: an overhead isometric view, for when the player is adding to the dungeon or watching what's going on, and a first-person perspective view, for when he chooses to inhabit the body of one of his creatures. The latter is particularly useful, allowing direct participation in battles, exploration, etc. Incredibly, despite this diversity, the game looks visually impressive. The texture-mapped backgrounds are marvellously gloomy and atmospheric and lighting is provided sporadically by some beautifully realistic burning torches.



An interesting range of evil minions is available to the player. (Clockwise from top left) a rather paunchy demon with huge teeth, but unluckily, no legs, an oversized cockroach, some scary women in leather and armour, and a Fu Man Chu style wizard. Only in England, folks



The map screen shows how the dungeon is developing (above). The overhead view lets the player watch his filthy retinue (below)

Exploding lizards can be thrown at adventurers, which fly through the air with hilarious, frightened screams



But it is the wit of the game and the attention to detail evident in the dungeon's evil monsters which really impresses. As Carter points out about the latter, 'The creatures are bitmaps, but they're made up from a very complicated system of bitmaps so they can all have different weapons, which makes it horribly complex. There's actually 90 megabytes of graphical data available on screen at any one time, and on an 8bit machine, trying to get that in is a bit of a challenge.'

As well as the individual graphical characteristics, each creature, from the killer wasps to the lumbering dragons, has highly complex AI routines. They'll personalise sections of the dungeon, they'll steal the dungeon master's gold if they get bored or feel they're being treated badly and, if the larger ones get hungry, they'll start eating the smaller ones. Hardly the sort of thing you'd find in *Zelda*.

Dungeon Keeper's catacombs also hold some great weapons. Carter wanted to include grenades but knew this would not fit in with the RPG setting. Instead he invented exploding lizards to be thrown at heroic adventurers and which fly through the air with hilarious screams and puzzled, frightened looks on their faces. The torture rooms carry on this vein of dark humour. When an adventurer is tricked into taking an acid bath, the camera pans away and you hear his mawkish English, Monty Python-style voice saying, 'A bath? Thank you, could you spare a loafer?'

Continued next page

The attention to detail expands beyond sick jokes, though, as Carter explains, 'There are little bonuses around each level as well, so if you're tunnelling out, you might discover a small group of creatures which will then come into your retinue. I think one of the main attractions of games like *Yoshi's Island* and *Super Mario World* are all the bonuses you find dotted around each level. If you give people little surprises and presents like that… it makes them feel special.'

Syndicate Wars is, of course, a sequel to, and an extension of, the classic strategy title. The game's lead programmer, **Mike Diskett**, says of the project, 'we were aiming for *Syndicate*, only more so. It was just basically improving the weaponry and using the latest technology to make it as atmospheric as possible' – an aim the team seem to have achieved.

The game is set one hundred years after the original ended. The corporation, which exerted order over the world at the climax of *Syndicate*, has now crumbled, allowing rival groups to seek global domination. Consequently, the player can continue working for the original or defect to one of its rivals: a mad religious sect or a group of nomadic bikers.

Despite the gap between the two settings, the sequel has the same 21st century cyberpunk look as it predecessor – huge cities, endless skyscrapers, futuristic vehicles, etc. It's also mission-based with the player receiving orders via an internet link to the preferred organisation. These missions include assasinations, prisoner escorts, preventing the execution of fellow agents and acquiring cash (most probably through illegal means). However, unlike the original title, the *Syndicate Wars*' player actually takes on the role of lead agent, rather than giving orders to a computer controlled character, which allows a greater level of involvement in the game.

To compliment the new control method, cities can be freely rotated through 360 degrees and viewed from any angle to ensure the action is always observed from the best perspective. This versatility is impressive considering the complexity and high detail of the cities, with innocent citizens and vehicles moving around, begging to be caught up in gun fights. Better still, with the right weapons, all the buildings in the game can be destroyed, meaning *Syndicate Wars* takes place in a totally interactive environment.

On the subject of weaponry, the *Syndicate Wars* team are just as imaginative as their *Dungeon Keeper* counterparts. Especially entertaining is the crazy gas which causes anyone who breathes it to get their most powerful weapon and fire it at their friends and any other innocent bystanders in the vicinity. Also worth a mention is the razor wire, which can be







Vehicles whiz through the detailed city streets (above). A hectic laser gun fight ensues between rival groups (left)

Especially entertaining is the crazy gas which causes anyone who breathes it to get their most powerful weapon and fire it at their friends and any other bystanders in the vicinity





The map screen (top) is where the player chooses his next destination. An inventory screen (above) lists the player's weapons





There will be 30 to 40 maps in *Syndicate Wars* each with a different graphical style. However, the Bladerunner look is generic

tied between two buildings and will decapitate anyone unlucky enough to attempt walking through. The fact that the armoury varies from group to group is a nice touch. The religious zealots, for example, only use weapons designed to make them look magical and god-like whereas, presumably, the bikers will use anything they can get their hands on.

As with *Dungeon Keeper*, *Syndicate Wars* is full of small, peripheral features which will add much to the main game. For example, one inspired touch is the inclusion of TV screens dotted about the cities which show video footage from, amongst other things, the new manga film, Ghost In The Shell. Although purely graphical flashiness, this little coup ensures the doomed future dystopia feel of the game is accentuated with allusions to Anime visuals.

It seems then that the qualities which have become associated with Bullfrog over the last ten years are still prevalent at the company. Both *Dungeon Keeper* and *Syndicate Wars* look to be absorbing, innovative titles, and there are more on the horizon. This can only be good news for both PlayStation and Saturn, currently ailing under the weight of too many arcade conversions, as well as the PC, where FMV fever is still raging. Could it be that Bullfrog will inspire a new rush of intelligent, quirky games on the next gen formats? It's almost too much to hope for.

Currently spawning

Theme Hospital

In this sequel to *Theme Park*, the player becomes administrator of a small country surgery and must progress to running a city hospital. Along the way he can test new drugs on unknowing patients and hire variously able doctors and attempt to do something the government can't – budget the running of an NHS establishment correctly. The fictional diseases are highly amusing – bloated head, and fashion victim (where patients suffer from a need to wear kipper ties and flared trousers) are two of the more serious ailments.



The man in the bottom right is suffering from accelerated hair growth. But it kind of suits him

Gene Wars

A kind of futuristic *Populous*. The player controls one of four warring tribes who have been ordered by a higher intelligence to clean up the planets they've wrecked through years of combat. Hence loads of terraforming and creating creatures to inhabit the worlds. The main aim though, is to sneakily attack the other tribes without anyone noticing by genetically engineering vicious dinosaurs and ordering them to eat your rivals. Unfortunately, your rivals had the same idea.



Gene War*'s isometric-style view is very reminiscent of *Populous

Creation

The only game currently in development at Bullfrog to use a real 3D environment, populated by real 3D moving objects. The premise is another future dystopia yarn. Earth has become polluted and inhospitable so a group of marine biologists salvage the last few sea creatures and transport them to a distant ocean planet. From here on, the player patrols the ocean in a small sub, checking up on the dolphins and whales (the programmers have studied their movement in depth and it looks highly convincing) and maintaining and managing fish stocks. However, it's not all Free Willy. A dangerous hallucinogenic fungus is growing across the ocean surface causing animals to go psychotic, and attracting the unwanted attentions of the galaxy's shameless drug dealers. The player's role is to protect wildlife against the fungus and to see off the dealers who want to export it. Expect some beautifully atmospheric sub-aqua vistas and enchanting ambient score.



***Creation*. The only game Edge saw at Bullfrog that used a first-person view**

Populous 3

Currently very early in development, the designers are coding the gameplay so no screen shots are available. Expect more details in future issues of **Edge**.

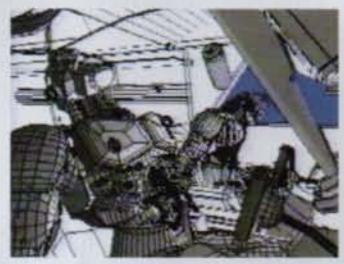








Making













The making of Z's pre-rendered cut-scenes was initiated by Maverick's storyboards (top left) before being passed into the talented hands of Bitmap Brothers duo, Chris Thomas and Terry Cattrell, who rendered the entire footage using 3D Studio. The results are well-designed and superbly implemented

movies

Pre-rendered animation is seldom well-realised, and often superfluous. **Edge** explores the state of subordinate art

Jesus Christ. I've got front-end coming out of my backside. So groaned the nameless journalist to his companion as they stalked out of the Winter ECTS. It was hard not to feel sympathy. Substantially more potent entry-level hardware, coupled with recent advances in video decompression and increasingly affordable 3D animation software, have all contributed to the routine inclusion of 'cinematic' rendered FMV sequences in almost every computer game. Technologically, at least, what was exotic a couple of years ago has already become mundane. Yet familiarity need not necessarily breed contempt, as anyone familiar with the fight scenes from Rollerball will testify. So why do reviewers and punters alike seem so dismissive of 'out-game' material? Is its prevalence equalled only by its irrelevance? Is it just dull? And will the words 'to skip intro please press start' remain permanently stamped at the front of game manuals?

Will Jeffery and **Jake West** of Maverick, a small Soho-based company now specialising in the area, hope not. They are currently finalising the storyboards for the intro/outro/cut-away sequences for the Bitmap Brothers' long-anticipated war strategy epic, Z, a project that has occupied them, on and off, for over a year. Even the most perfunctory look at the results is enough to realise the effort has paid off handsomely. The animated sequences abound not merely with gorgeous design but with character, wit, and dynamic timing. Watching the explosive exploits of Z's renegade robots excites a much more precious commodity than admiration… involvement.





Photography by Jude Edginton

Will Jefferey (left) and Jake West (right). With the current trend for FMV in videogames, talented film graduates such as the Mavericks are in demand

Both Will and Jake graduated from West Surrey College (though several years apart) with degrees in Film, Video and Animation. 'I don't what to blow our trumpets,' says Will, 'but we did pretty well at film school.' Not an exaggeration, it appears. Will's graduation film, False Prophet, was aired on the BBC and Jake's, Club Death, gets a video release later this year. They met in 1992 working on film trailers at Key Films and soon realised the disciplines they had brought to bear on 16mm shorts and the highly-exacting time-frames imposed by film trailers – economical narrative structures and high-impact editing, in particular – could have a fruitful application in the burgeoning videogames market.

It was not long before they'd garnered a considerable reputation in the games community for their ability to edit footage and music into dramatic, eye-catching promo

Continued next page

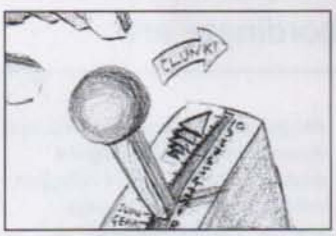
Development focus

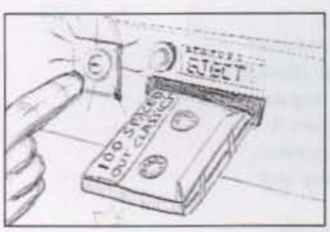
trailers. Companies such as Interplay, Domark and Renegade all sought their services and the promos, Will remembers from early ECTSs, 'were clearly better than the competition'. Not least, Jake adds, 'because games companies didn't have to take film too seriously then – it wasn't an integral part of the games.' One company, however, was quick to recognise the potential. **Eric Matthews**, guru and presidio of the legendary Bitmap Brothers, hired them to do a promo and ended up suggesting they did some in-game work for him. Which led to Z.

In Matthews, the Mavericks found a man clearly committed to the same vision – 'to integrate video footage into the game so that it's always relevant, always contributing to the narrative.' It is unsurprising that the Mavericks' chief complaint about most rendered scenes is they fulfil no clear function in the game. 'You get the feeling,' says Jake, 'that a lot is just tacked on because everyone else has some.' The first step is to 'understand what the game is really about' and 'understand what might excite prospective players.' That both Will and Jake are avid players themselves (Jake can trace his addiction to *Manic Miner* and beyond) is certainly helpful in this respect but what really made the difference was the ability, honed in all that film work, to find a hook in the storyline.









Maverick storyboarded Z's rendered cut-scenes to provide a sense of continuity to the action and to embody the game with real personality and humour. Nothing is wasted and every frame has a purpose



Z is essentially a futuristic war strategy game in which territories on distant planets must be captured. When Matthews approached the Mavericks the game design was sufficiently advanced that their brief was 'to create something around what was already there.' In less imaginative hands this may have resulted in the usual stolid clichés – implacable machines rumbling over battle-torn moonscapes and the like – but as they immersed themselves in the game the Mavericks found something a little more offbeat that fired their interest. At certain points during the action, if neglected, robot troops in his command would go into 'drop-out mode': play cards, take a drink, and generally kick back. Who were these guys? What was the war like for them? The Mavericks had a hook, and not coincidentally, a hook that complied to one of the first laws of film writing – the plot carries the action but the subplot carries the theme. 'Here was a chance to create some characters you could actually care about,' reflects Jake, 'something the player could buy into. Good equipment and good graphic artists are not enough,' he continues, 'most rendered stuff I see is proficient in design and execution but lacks personality.' The robots that Will and Jake originated with Eric Matthews – the cigar-chewing butt-kicking Commander Zod and his 'lazy-assing', beer-guzzling, head-banging grunts Brad and Allen – ooze personality. Moreover, the scenarios that feature them have a depth of nuance and humour (including movie homages aplenty and some sly jokes at the expense of 'the usual rendered space-craft drifting through deep space clichés') more normally associated with a good film. 'It's got to be like the game itself,' Will maintains, 'you want it to be good enough to warrant replaying.' The Mavericks are keen, however, to deflect some of their glory. 'It's a mixture of Eric's reality of what he wanted for the gamer and our reality of having to tell the story in a certain amount of time. Eric told us where he needed the sequences and we wrote scripts based on the



Bitmap boss, Eric Matthews (above), is a firm believer in the effective use of storyboarding

Here was a chance to create some characters you could care about, something the player could buy into
Jake West






Although *Z*'s pre-rendered scenes are an incredibly high standard, it is the characterisation and witty storyline which really impresses. The robots are reluctant warriors, more interested in playing cards and swigging beer – as a result they find themselves in numerous tricky, and hilarious, situations

discussions. Then we'd produce storyboards (or animatics) which we'd to and fro until we'd got the right length, variety, sense of reward and failure in the game. The Bitmaps animated everything,' Jake adds. 'Once we'd finished a storyboard sequence **Chris Thomas** and **Terry Cattrell** would build, light, and texture-map




Z* is the soon-to-be-released war strategy sim on the PC. It looks set to rival *Command & Conquer

the models from wireframe to the fully-rendered thing. They built the spaceship, the characters, all the detail in there. We'd give them suggestions on how the shots would edit because when you're doing 3D animation like this you've got to get it right first time. So we had a lot of input in terms of how the shots would be framed and precisely what movements would take place to ensure the cuts were smooth.'

It seems that Maverick's professional film expertise was crucial to the look and feel of *Z* and yet they're 'not aware of anyone else with our background doing this stuff. Often you see sequences and you've no idea who's done it. I presume it's the programmers themselves.' A state of affairs Maverick would like to see change. After all, most game FMV clearly apes the aesthetics of the cinema. You don't expect the director of Batman to design the computer game as well so why expect a graphic artist to produce a convincing video sequence? *Z* demonstrates the wisdom of bringing specialised skills into all aspects of a game development team and Maverick are justifiably proud of their part in it.



'To be honest, though, we're more interested in live action than computer animation,' confesses Jake. 'The project we're working on at the moment for Time Warner is an FMV solution [substantially helped, it seems, by a decompression routine from a company called Eidos – see **E**30]. We'll be the producers, writers and directors of all the footage.' Unfortunately, the project remains cloaked in secrecy and the lads refused to reveal more. One thing was promised, however, '*Wing Commander* it ain't.'

nuGame

culture

Music, design and interactive entertainment are creative spheres on a collision course. Edge witnesses a videogaming renaissance

Continued

Traditionally, and often rightly, regarded as the playground for nihilistic, disaffected teenagers, videogames are undergoing a transformation. Slowly disappearing are the stereotypical, mainstream media-pushed images of schoolchildren shunning their homework for another bout on *Mario*. Instead, thanks to some astute marketing tactics by the major console manufacturers, Sony in particular, interactive entertainment has experienced an image upheaval of colossal proportions.

Consider the evidence. Last year's Glastonbury nearly drowned under heaps of flyers advertising PlayStation, which also happened to be perforated into roach-sized chunks. Psygnosis' *Wipeout*, the latest PlayStation barnstormer, appeared with an accompanying compilation album of dance cuts, Designers Republic packaging and a soundtrack including efforts from Orbital,





Ministry of Sound's PlayStation room has proven popular and was a smart move for Sony

heaps of PlayStation flyers, perforated into roach-sized chunks

Leftfield and The Chemical Brothers. Gremlin signed up dance-guitar band Pop Will Eat Itself to supply the soundtrack for its PlayStation game, *Loaded*. Computer-based artist, William Latham, has provided reams of artwork for, and even directed, the latest video of pop-dance band The Shamen. London's influential Ministry of Sound club opened up a room full of PlayStations. JVC UK has even persuaded some of the country's top jungle practitioners to remix music from the soundtracks of Namco's *Tekken* and *Ridge Racer*.

Games are written about incessantly in the magazines which exist solely to instruct people on what to wear, what to do and what music to listen to, in order to achieve a state of terminal trendiness. Jungle guru, Goldie, who would probably send music critics into a swoon by sneezing into a microphone, takes his PlayStation to all of his influential Saturday-night DJ-ing gigs at London's Blue Note club. Cream, the Ministry's Liverpool-based equivalent, is finalising a tie-up with a videogames hardware manufacturer. Sony sponsored the recent tour of house and trance guru, Brian Transeau (aka BT), and The Face's recent club guide. The worlds of dance music and videogames, in particular, seem to have collided like tectonic plates and stuck to each other.



One of Sony's first exercises in hype – a subtle hijacking of the style press

Yet, not so long ago, gamers were either approximately 12-years-old or bearded collectors of Pink Floyd T-shirts, united as a group only in tragic unhipness. So how did the games world step out of its bedroom and into the zeitgeist?

The moment that this shift began to occur can be pinned down precisely – it is the moment Sony started thinking about paving the way for PlayStation's arrival in the UK. At the time, Sony, of course, knew bugger all about console marketing, but, as one of the biggest music publishers and consumer electronics manufacturers, knew all about popular culture. With no baggage carried over from previous generations of games consoles, and plenty of cash to spend, it sat and thought about what to do.

There was the knotty problem of how to get recession-hit punters to part with a whopping £300, for example. Sony Computer Entertainment's underground marketing guru, **Geoff Glendenning**, reminisces, 'A lot of kids have personally spent £100-odd on a 16bit console, and aren't ready to buy another one. We had to aim for the 15 to

24-year-old market. I knew I had to get the underground magazines in, the people who are real individuals, get them on our side and create massive hype, and I needed to do that six months before launch. It had to be almost as if PlayStation was something they had personally discovered.'

Glendenning is a keen clubber, although his nocturnal activities are somewhat curtailed these days by two children. First came the Glastonbury roach stunt (sadly, a blasphemous quote from, natch, **Edge** magazine on the offending objects led to the threat of a Muslim fatwa, and all Glastonbury leftovers have been burnt). Glendenning says, 'From there, I wanted to get into the clubs – it was a convergence waiting to happen. Both dance music and videogames are forms of escapism.'

Hence the deal with the Ministry of Sound, to set up a PlayStation room. **Mark Rodol**, managing director of the Ministry, explains the decision. 'A lot of the people



Geoff Glendenning: catalyst for the more underground activities of Sony's PlayStation marketing

I wanted to get into the clubs
It was a convergence waiting to happen
Geoff Glendenning, SCEE

who come to the club have grown up with videogames. But the 16bit machines could be classed as toys. The great thing about the new generation machines is that the technology enables games to have content, design and music which can stimulate young adults.' Like Sony with PlayStation, Rodol is not interested in selling his product to teenage cheesy-quaver-ravers. He also points out that, 'years ago, you'd buy records and dance around in your bedroom. Nowadays, record shops are also selling videogames.'

These days, the MoS is more of a branded business enterprise than a club – it has its own record label and shifts obscene amounts of merchandise. Rodol reveals that it is lining up an interactive CD-ROM venture. 'We're working on a couple of projects at the moment, the idea being to recreate the Ministry and its different rooms, letting people be light jockeys as well as DJs.' Meanwhile, the South of England has the Ministry, and the north has Cream. Leading house music label deConstruction has just concluded a tie-up with Cream, and is part of the BMG conglomerate which numbers interactive multimedia and games software among its many activities. According to deConstruction's **Dave Pullen**, 'The people at Cream would love to do a club game – I know they had some dealings with BMG Interactive at one point – but the problem with marrying the club culture to games is timing. Between choosing the tracks for such a project and getting it on disk, they would be out of date. But there will be an increasing use of technology in clubs. Clubs like The End, in London, for example, are into the idea of being a leading-edge environment. Cream is looking at putting graphics projectors in Liverpool, for example, and you could say that if you needed to source the graphics for those projections, you'd go to a company like Sony.' Sony is indeed working on such a venture (see p64).

In more general terms, Pullen admires the job Sony has done in marketing PlayStation to club-goers. 'This 18 to 22-year-old group is so media-literate that it's very hard to sell to them. You have to be quite subtle. They have a lot of disposable income, but they don't give it up easily – they've seen it all before. But Sony has managed successfully to appeal to that group.'

It's a crying shame, then, that Sega – whose Saturn is now seen, in technical terms at least, as being on a par with PlayStation – has dismally failed to insert the console into popular culture. Apart from a few high-impact



Creation of 26 year-old DJ, James Barton, Cream is the epitome of the modern superclub. It relies on immaculate branding, national tours and is now part of a multimedia empire



Sponsoring dance icons such as Brian Transeau has added kudos to Sony's brand

Continued next page

ads, Sega's marketing profile has been non-existent, and pathetic sales figures have led to the sacking of 50 people from its Cromwell Road HQ. The company can only bleat pathetically about Sony spending £5 million on advertising and marketing, a claim which Sony's Glendenning disputes, adding that his most effective marketing has cost virtually nothing. Glendenning has signed a deal for Sony to sponsor the UK snowboarding championships in March, repeating what, for him, is almost a mantra – that this will be done with subtlety. Sega could easily get its act together and muscle in on this sort of action – if only it would regain the necessary nous.

Glendenning is adamant that the key to such effective marketing is getting the right individuals into the company, so it will be interesting to see who Sega hires in the near future. But there is something else – over the past couple of years, all things even vaguely technology-related have become fashionable.

William Latham is a man once employed by IBM – a status of corporate computer establishment that's hard to beat. He is one of the UK's most credible computer artists, working on the premise that to generate art on a computer, it is necessary to write specific art-generating programs. Anyone doing otherwise is merely a designer, he says. He makes weird, strangely organic-looking computer sculptures and claims an affinity with the pop artists of the sixties.



Nemeton, The Shamen's web page, features visuals by Computer Artworks



Outside the snooty UK art establishment, he commands esteem in international art circles. And if further proof is needed that his computer-generated work has penetrated popular culture, just go down to the local record store and hunt out some of The Shamen's recent record or CD covers, all of which sport his sculptures. Latham's images are on billboards all over the UK advertising The Shamen's new single Heal The Separation, on The Shamen's well-regarded Web site (no pop band worth its salt would dream of living without a Web site these days), and he even directed HTS's video. A forthcoming screensaver from his company, Computer Artworks, called Organic Arts, will soon grace the hippest PC desktops in the country. Again, music and CD-based technology are merging and taking up station at the heart of popular culture.

The Shamen's **Colin Angus** spells out just how technologically aware the band is. 'Inevitably, computers are playing an ever greater role in what we do, from the making of the music to our involvement in the net via Nemeton, our Web site. Even in the 'live' area they play a role. For example, the last London show was 'netcast'. Ultimately, we'd like to 'netcast' our own audio and visual programming (Shamen TV, perhaps?) from Nemeton, which will become a 3D virtual world before too long (now that VRML is imminent). More realistically, and right now, we have realtime audio on our server, so 'Shamen Radio' via the net is not far off.' Angus' approach to games is refreshing. 'We've featured PlayStations alongside the Macs with internet links at some of our recent shows. I do occasionally indulge myself on flight simulators for the Mac, but that's it for games. I don't really care to sit in front of a monitor unless the endeavour is creative, communicative or profitable.' An attitude which, one suspects, is pervasive at the more environmentally-friendly end of the dance music spectrum.

Elsewhere, the music industry, with its love of new formats (and its philosophy that a

> computers are playing an ever greater role in what we do
>
> Colin Angus, The Shamen





William Latham (above), is the 28 year-old creator of Organic Arts (right)

new format equals higher profit margins) is starting to churn out interactive CD-ROMs which, often, can also play as music CDs. Last year saw efforts from Peter Gabriel, The Cranberries, The Rolling Stones and Durutti Column, to name but a few. They were all, to varying degrees, dire, bar an effort from obscure but wonderful dubsters Zion Train. Now, kooky Americans, The Residents and Devo, are readying interactive CD-ROMs, and Abbey Road Studios has even set up an interactive CD-ROM production studio in conjunction with Apple. The dance music fraternity has started to muscle in – last year's Flux Trax compilation played weedy graphics when placed in a PC or Mac CD-ROM drive, and the recent *Sounds of the City: Manchester* CD comes with a CD-ROM comprising an interactive guide to Manchester and even a virtual DJ's booth (which is, sadly, all but unusable). Here, Saturn owners may have the edge over PlayStation owners, as some of them will play on CD-based consoles equipped with MPEG cards. But this new-found enthusiasm among record companies for all things CD-ROM can only widen the popular appeal of computers and, by association, games consoles.

On a slightly different note, here's an intriguing thought. Everybody perceives Japan as the land of karaoke, business cards and, possibly, mustachioed Italian plumbers. All, of course, plummeting to the depths of uncool. But Ocean recently came up with ads for *Raiden* and *Zero Divide* which, it has been noted, reflect imagery in common with the Designers Republic's work. Ocean's **Declan Brennan** reveals a surprising provenance. 'Some of the imagery in these ads was brought in from Japan. *Zero Divide* also uses music from a top Japanese techno band.' Despite its strait-laced image, Japan has a fiercely trendy subculture (although a fair proportion of that subculture tends to drift overseas). Japanese techno has a reputation for quality and lack of compromise, perhaps enhanced by its unavailability outside Japan. Like it or not, Manga has insinuated its way from the Japanese underground into popular western culture. If the massive Japanese corporations develop the wherewithal to tap into the fashionable culture underneath their collective nose, the world's 'hip' centre of gravity could make a surprising shift eastwards. Whether this will actually happen or not is anyone's guess.



In Japan, videogame companies are gatecrashing club culture, providing linked-up consoles and games available way before their release dates

Gauging the

perceived hipness of playing games is a vexed exercise. Once everyone starts pursuing a pastime, of course, it loses the cool associated with exclusivity. Despite future projects, such as sponsoring the UK snowboarding championships and generating an interactive lifestyle magazine to run on PlayStation, Geoff Glendenning admits PlayStation will 'go mainstream' later this year. He adds that 'software is the key this year,' and for sure, once a large enough proportion of the population has a PlayStation (or Saturn), its hipness will be dictated purely by the status of new software.



US Gold's *Johnny Bazookatone* gained from some club-style concept art by music design company, Fluid, but lost out due to the stagnant game concept lurking underneath the gloss

> there's no street kudos attached to the 32bit consoles at all
>
> Richard Benson, editor, The Face



Sony seized the opportunity to sponsor the inline Xtreme Skating Championships, promoting PlayStation in a a scene already fuelled by hype

Richard Benson, editor of The Face, is unconvinced that gaming is the acme of street cool. 'I think our readers are interested in games, but it's still more of a boys' thing. There's a bit of ennui with the whole scene. The 32bit consoles have been marketed as fashionable products and accepted as such. But there's no street kudos attached to them at all.' Benson is, however, interested in the retro games revival. When questioned about *Wipeout* he says, 'the packaging is interesting – it's really nineties. I like the bit of *Galaxian* that Ridge Racer gives you at the start.'

Some people are never satisfied – but then, that's what being a fashion arbiter is all about. One thing is for sure, though – in terms of diversity, the videogames industry has never had it so good, and the convergence of disparate creative entities will only lead to better designed, more stimulating interactive entertainment.

Continued next page

Continued

design trailblazing: WipEout

In the business of videogames software, there is one sort of Holy Grail: the landmark game. No matter how much cash is sunk into games development, however, these appear all too infrequently – the vast majority of games which creep into the shops leave as much impression as a gnat on a rhino. But, every so often, a game appears that grabs the collective games-playing forelock, tugs hard and sets itself up as a landmark in an otherwise featureless environment.

Doom, naturally, is one such game, and in the past landmarks have included *Sonic the Hedgehog*, *Tetris*, *Mortal Kombat* and so on. This tiny list demonstrates landmark games aren't necessarily better than their peers, but, rather, they are impossible to ignore. Now, happily, a new game can be added to the list: *Wipeout*.

Although *Wipeout* is a fast and furious hover-driving game, that put PlayStation on the gaming map, it is the memorable techno soundtrack (a mixture of licensed Sony music and in-house compositions), and snappy Designers Republic packaging that makes the title noteworthy. Its combination of fast gameplay, a well-defined identity and breakthrough graphics make it a good game, but its positioning on a sort of cusp formed by the intersection of videogaming and music culture elevates it to landmark status. One feels sure that it *will* be ripped off – as all landmark games are.

Wipeout has done well for Psygnosis. According to switched-on PR exec, **Glen O'Connell**, at the time of writing, 60,000 copies of *Wipeout* have shifted in the UK (which means more than 50 per cent of the country's PlayStation owners have a copy), and over 250,000 have left the shelves throughout Europe. O'Connell adds, 'It's our most successful game developed in-house. *Lemmings* and *Destruction Derby* are as or more successful, but they were both published on behalf of someone else.'



Key to *Wipeout*'s design concept were Psygnosis' Nick Burcombe and Nicky Caruss-Westcott

dance music is integral to the UK's social culture

Nick Burcombe, Psygnosis



Wipeout's influence even extends to a line of cute clubwear for both sexes



On the surface, it's something of a revelation that such a successful game should have issued forth from Psygnosis, a company which, for years, was almost a one-product stable. That product being *Lemmings* – the cute but surprisingly cerebral Amiga game which appeared in the late eighties and has now reached just about every platform. It's actually simple to explain this turnaround: Psygnosis has been awakened from its Rip Van Winkle slumbers by an injection of huge wads of cash from Sony. In June 1993, as part of the initial groundwork for PlayStation's arrival, Sony bought Psygnosis, a move which, at the time, many thought might end in tears.

Psygnosis, it appears, responded well. O'Connell says, 'We always had the creative resources, but sometimes the money wasn't there.' More than a few games publishers must be acquainted with that predicament. But the way in which those truckloads of Sony readies were turned into *Wipeout*, rather than another unplayable mish-mash tagged onto a pre-rendered SGI intro sequence, presents something of an object lesson to other games publishers.



A tie-up with Designers Republic which goes beyond the packaging and into the game itself, new music from the game soundtrack provided by quality techno practitioners Orbital, Leftfield and The Chemical Brothers, and an associated, fairly credible, compilation album – these are all firsts for a videogame. So where the hell did they come from?

According to **Nick Burcombe**, *Wipeout*'s chief designer, the idea for *Wipeout* was hatched in time-honoured fashion – down the pub. Burcombe says, 'The idea owes a lot to an old Amiga game called *Powerdrome*, which was a nice concept but the technology wasn't there. I've always been into dance music, and a dance music soundtrack is the only thing that would have suited an ultra-fast game with attitude. It also fitted the fashionable market into which Sony wanted to put PlayStation. Not that we consciously tried to do that, however.'

For Burcombe, giving a game a soundtrack lifted from the clubs seemed obvious – his clubbing mates liked to play videogames, as do the overwhelming majority of clubbers. He points out that, 'people who go clubbing are always looking for a new form of interactive entertainment. Everyone has now proved that dance music isn't some trend that will eventually go away. It's an intrinsic part of the UK's social culture.'

Of the three headline techno acts involved with *Wipeout*, only Orbital went so far as to specially record a new track for the game, although Leftfield provided a radical remix of the track Afro-Left. Burcombe says, 'I went

down to Orbital's studio, showed them a quick video of the game and they wrote the track *Wipeout*.' Orbital's **Paul Hartnoll** is an avid gamer: 'I've played videogames for years. We made the track up while watching the *Wipeout* video – it was like writing music for *Thunderbirds*. The brief was essentially pretty loose – to write something about six minutes long, with no breakdowns in it. We're going to rework the track for our next album.'

Hartnoll's motivation for writing the *Wipeout* track is clear. 'I want to make film music. People keep using our tracks in films – Halcyon was used in Hackers, and we've got a track on Johnny Mnemonic – but I'd love to do the music for an entire film.' Cannily, he describes *Wipeout* as 'a sort of Gerry Anderson racing game. I've always been interested in making music prompted by visual things.' Orbital fans will be well aware of the filmic tendencies prevalent in all their albums, and shouldn't have to wait too long for their next Orbital fix. Hartnoll reckons he is 'two or three tracks short of a new album.'

The Designers Republic is one

of the the UK's top graphic design companies. When a nineties retrospective occurs in the next millennium, DR, formed in 1986 and based in Sheffield, will be accredited with providing the look and feel of the decade. The company is best known for its record sleeve design work – currently, it does a lot of work for, among others, stylish dance music labels Warp and React, and indie bands Supergrass, Pulp and Sleeper, and it first came to prominence after providing Pop Will Eat Itself with a stunningly original design identity. It also runs Sheffield's hippest club, The Republic.

In other words, Designers Republic is the business. And it knows it. **Ian Anderson**, founder and guiding light of DR, explains the circumstances that led to his company's work with Psygnosis on *Wipeout*. 'We were contacted by people in the Psygnosis art department who were Designers Republic fans – they were aware of some quite obscure stuff we'd done. We said that, for example, with record covers, we try to design things that aren't just pictures of bands, and the same principle should apply to *Wipeout*. There would be no point in us doing it if we were going to have to compromise by, for example, using the usual Dungeons and Dragons lettering and a crap screen grab. The point was to come up with something different to anything that had gone before.'

'From there we developed the logos, followed by weapon icons for use on-screen. We'd go to Psygnosis, see the game in action and where it had got to, and come back and do something else. They'd say, "Can we have a bit of that in the game, or can we adapt that for this?" We were vibing each other up. The typefaces were originally developed for scores, so we made them into a full alphabet. Then we designed some of the in-game billboards.' Plus, of course, the packaging for both game and music CD.



Anderson clearly enjoyed the *Wipeout* project, and is scathing about archetypal games packaging. 'It's all Roger Dean, Yes cover stuff, or else, heavy metal versions of sci-fi. Look at how design for music has evolved. Games packaging is aimed at the same market but it hasn't moved on at all. In the past we've been contacted by games companies such as Mindscape and Gremlin.' At this point, although anxious not to antagonise potential customers, Anderson is clearly disappointed that neither company courted DR as assiduously as Psygnosis.



Sheffield-based Designers Republic (Ian Anderson, centre) were drafted by Psygnosis to lend authenticity and credibility to the *Wipeout* project

Talking to its protagonists, the impression is *Wipeout* emerged from a sort of prevailing mist of good vibes. Anderson says, '*Wipeout* strikes such a chord; it seems obvious now that it's all there.'

Psygnosis' **Nicky Carus-Westcott**, chief artist on *Wipeout* and the link between Psygnosis and DR, suggests why it works. '*Wipeout* was a real first – before, every element of our games had been done in-house, including the music. We knew it had to be something really special, and we managed to persuade people to spend some of the budget on getting other people in. Most of what you see in *Wipeout* was generated from the design team, rather than being a marketing issue.'

Nick Burcombe was given the backing to pursue his enthusiasm for dance music – that is, Psygnosis opted to take a risk, in this instance, with Sony's money. The rewards are there for all to see – take note, games publishers.

As for the future, Burcombe promises his next game will be 'very, very dancey. *Wipeout*, with its hovering spacecraft is a bit 'Boys' Own' – my next project will be more of a multi-sex one.' Psygnosis is working on *Wipeout 2*, and DR will once again be involved. Techno hero Dave Angel has approached Psygnosis with a view to musical involvement. The top item on Paul Hartnoll's *Wipeout 2* wish-list – a split-screen version – seems unlikely, though. Still, you can't have everything.



Designers Republic promo for record label Warp has much in common with its *Wipeout* typography

Continued next page

wipEout strikes such a chord.
It seems obvious now it's all there
Ian Anderson, Designers Republic

amplified kudos: music

Electronic music and videogames, while regarded by outsiders as separate, have in fact been making similar noises for years. Now, finally, they have walked down the aisle and entered a relationship that looks likely to last a long time.

When you cut through the hype and peer at what lies underneath, it becomes obvious that electronic music and videogames are variants of the same thing – pure escapism. Clubbers put on their flashiest togs and go out hoping to find, at their favourite clubs, a fantasy world untouched by reality, in which everything is alien and the hassles of the week seem to belong on a distant planet. Videogames are also primarily about creating fantasy worlds in which people can immerse themselves to escape from reality.

Both span an emotional spectrum. There's the cutesy end of the games world, in which players can pretend to be a hedgehog or a plumber navigating a pastel-shaded world which looks like the inside of a packet of Liquorice Allsorts. The clubbing world's equivalent is the dolled-up handbag house scene, in which girls often dress like fluffy bunnies, and everyone wears a cheesy grin and waves their hands in the air.

Then there's the visceral end, in which gamers pretend to be in the middle of a vicious street fight or driving round a racing circuit at 200mph. On a dancefloor, this is provided by the techno clubs, which combine insistent, superfast drum patterns, sub-bass and sound effects to create an energy rush bypassing the brain and affecting the body. Every game genre has a music equivalent, and vice-versa.





Beat combos The Chemical Brothers (top) and Orbital both feature in *Wipeout*

It's rather surprising the two cultures took such a long time to collide. Dance music, famously, has become a musical force on the back of technological advances – most of it is generated purely on electronic equipment – so its makers are used to working with machines, interested in all things technological and often, because of this, pretty clued about the latest developments in the games world.



Indy band Pop Will Eat Itself provided music for Gremlin's PlayStation *Loaded*

Colin Angus, founder member and musical brains behind dance-crossover band The Shamen: 'Certainly, musicians play games on computers because they own computers, and I often observe interminably enthusiastic studio sessions (during working hours, no less) of *Doom* and suchlike shoot 'em ups. I'm amazed at how violent some of these games are, yet they are deemed perfectly acceptable, even for minors. No doubt, if someone were to produce a game where the characters were clutching spliffs instead of automatic weapons it would be banned immediately.' What sane person would argue with that?

The world of games development, meanwhile, becomes inexorably more competitive, and games manufacturers are constantly looking for new aspects which could enhance the games-playing experience. Gremlin's **Mark Mattocks**, for example, describes his company's use of a track from Pop Will Eat Itself on the soundtrack of its new PlayStation game, *Loaded*. 'We're always trying to bring something extra to our products. Games have been slated because of their music, but people do listen to music,

> dance music is fast and lends itself well to videogames
>
> Mark Rodol, Ministry of Sound

so why shouldn't they be able to listen to music while playing a game?' PWEI, maybe, aren't strictly a dance band, but they're dancey enough to have put beats per minute counts on their record sleeves.

Mark Rodol, managing director of the Ministry of Sound, says, 'Dance music is stimulating in its own right. It's fast, electronic and lends itself well to videogames.' And, of course, now CD-based games consoles are the norm, and the space constraints dictated by carts full of expensive silicon have been transcended, there's room to put Red Book standard music onto game CDs.

The two cultures have a number of things to offer each other. It is known that an association with dance music can lend games a degree of street credibility. But clubs can also use videogames to their advantage. The clubbing scene is now so pervasive and popular that the big clubs are operating as multi-million pound businesses. Dave Pullen of deConstruction records has the following to say about Cream, the Liverpool-based club his company works with: 'Most ambitious clubs are thinking about where the whole club experience can develop. It's about more than the cult of the DJ – you have to add things. Clubs like Cream and the Ministry have written the rules, but they've got to find the next wave, and I think multimedia could potentially be that next wave.'

Sony's Geoff Glendenning is pressing hard to get clubs to use PlayStations to provide visuals. 'I'm working with some Video Jockeys (VJs). You can plug a PlayStation into a Barco projector, and we're working on sound to light stuff which creates its own graphics. This will let us put out subliminal messages in clubs – if people are in a club off their faces looking at PlayStation graphics, they'll associate them with all that's good in life!' Thus, the clubs get their visuals, Sony gets some subtle advertising and everybody's happy. According to Glendenning, Sony is working on a specific club visuals CD for PlayStation, encouraged by moves from the likes of Jungle pioneer Goldie, who already takes a PlayStation to his regular club nights to provide the visuals. Along similar lines, The Shamen use video-based computer-generated graphics by William Latham at all their live gigs. Indeed, according to The Shamen's Colin Angus, Latham's work amounts to more than just a backdrop for the music.

'William's graphics and animations have been an integral part of the Axis Mutatis releases, having been featured on the sleeves, in the promo videos (the most recent of which was co-directed by William) and in the 'live' visuals. It was Latham's method, as much as his style, which got us together – he uses genetic algorithms to create, mutate and select forms, in a process which reflects our own interests in DNA, organic chemistry and mimetics.'





JVC unleashed top jungle artists (left) on a remix of *Tekken*'s music – although similarities to the game's tunes are hard to trace

> many people into jungle are also into videogames
>
> John Rahim, JVC



Only in Japan could a CD be produced by underground dance musicians equipped with Super Famicoms and *Mario Paint*. Unsurprisingly, it sounds dismal

Perhaps the most intriguing example of the two cultures working in harmony comes from an unlikely source – JVC UK. JVC's **John Rahim** has taken the music from Namco's *Tekken* and *Ridge Racer*, and commissioned remixes from renowned jungle artists. A 12-inch entitled Tekken: Windermere – the Jungle mixes, is due for release in March, with Jungle heroes T-Power, Lemon D, Dillinja and Dubtronix at the helm. This will be followed in April by trip-hop reworkings of *Ridge Racer*'s rather cheesy soundtrack by Ray Keith.

According to Rahim, 'I've done research which shows people who are into Jungle are also really into videogames.' Sadly, he declines to be more specific about this research, but it's easy to envisage younger gamers being jungle adherents. The project is definitely not an embarrassing attempt by JVC to cosy up to the kids – the remixes show surprising quality, and the specialist music press has reacted accordingly.

Continued next page

Then there's the rise of trance and more melodic strains of techno – multi-layered, insistent music, with simple melodies which often sound like the sort of buzzing tunes found in old C64 games. Some common ground is inevitable, of course – it's inherent to musicians working solely with electronic technology.



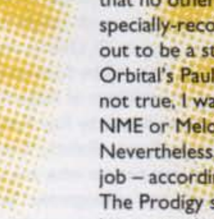
Sony's *Wipeout* music album successfully took videogaming into mainstream media. It even made the top 30

It doesn't pay

to get too carried away, and any nascent marriage is bound to have teething problems. Gremlin's Mark Mattocks has encountered one. 'The use of music on games is a new area, and the music industry sometimes sees things in a different light. There's one group that says games could increase the sales of music, and another side protecting people's interests. We were lucky to find Infectious Records, which was in a position of power and said it wanted to work with us, so it was going to. But we had to go through the MCPS [the music industry's royalty-allocating body] which had to change its requirements for music on games significantly. At the moment, music on games is treated as another category on a list, like music on videos, or the music played at the Queen Vic in Eastenders. I think the music industry will have to become open-minded.'

> it would be cool for DJs to mix ingame soundtracks
> Nick Burcombe, Psygnosis

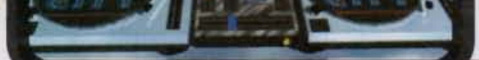
The *Wipeout* music CD, too, received some adverse press because the only completely original track on it was Orbital's Wipeout, incorrectly credited as Petrol on the sleeve (although Leftfield contributed a radical and excellent remix of Afro-Left from their award-winning album). Orbital were reportedly 'miffed', according to the music press, that no other acts had contributed specially-recorded tracks. This turns out to be a storm in a teacup. Orbital's Paul Hartnoll says, 'That's not true, I wasn't 'miffed'. I think the NME or Melody Maker printed that.' Nevertheless, the CD shows signs of a rush job – according to Psygnosis' Glen O'Connell, The Prodigy started recording a specific track but it wasn't completed in time. *Wipeout 2*, hopefully, will have more commissioned music. *Wipeout*'s designer, Nick Burcombe, says, 'It would be kind of cool to get a DJ to do a proper mix for the game soundtrack, so when you start the game, you could be anywhere in the mix. It just depends on how much room we have left on the disk.' Roll on high-density CD.



Both Psygnosis

and Gremlin have proved that, in O'Connell's words, 'We can get music industry people involved with games.' The indications are that the music industry is on the verge of becoming very interested indeed in games, particularly now the CD-ROM medium has demonstrated its cross-platform capabilities. An intriguing glimpse of this in action is the *Sounds of the City: Manchester* CD-ROM accompanying the eponymous DJ mix CD. This is a fairly typical CD-ROM, which plays on PCs and Macs and comes with interactive guides to Manchester and the labels and DJs involved with the compilation, plus a virtual DJ's booth which gives video-based tips from top DJs and the chance to DJ on a computer. The latter is far too crude, but with refinement, it could prove to a popular idea.

All this is just the tip of the iceberg – the cultures of dance music and videogames have barely met and exchanged pleasantries, let alone indulged in some serious cosying up to each other. That they have got even this far is extremely good news for the millions of gaming dance music enthusiasts. Hopefully this belated union will produce even more irresistible offspring.





Interactive CD-ROM, *Sounds of the City*, provides a tour of Manchester (right) and the chance to 'virtually' mix under tuition from top DJs

Grand Prix 2

Format: PC CD-ROM
Publisher: Microprose
Developer: Geoff Crammond
Price: £45
Release: March





Screaming toward a corner while attempting to outbrake a car on the outside. *GP2* is a beautifully crafted blend of action and strategy that always excites





Mounting the kerbs (top) results in a satisfying rumbling effect, and is necessary to keep the speed up. Out there all alone (bottom)

Last month **Edge** pondered whether Geoff Crammond is capable of making a bad game. The answer still appears to be 'no'. His list of past successes literally forms an integral part of videogame history: from his debut title *Revs* to the unique *The Sentinel* through the multiplayer *Stunt Car Racer* and onto *Formula One Grand Prix* he has shown that he can marry technical excellence with awesome playability. His latest title, *Grand Prix 2* continues the pedigree line.

Although it's ultimately a game's playability that counts, for a racing game it is essential that the technology is realised to ensure this potential. *F1GP2* has the fastest polygon engine that currently exists on the PC. In both VGA and SVGA it easily out-paces all its rivals, running at around 25 frames a second on a slow Pentium in VGA and near that on a P-100 with a decent graphics card in SVGA. These frame rates would be desirable for any game but when you consider the sheer number of textures *GP2* is shifting at one time they become exceptional.

On Monaco, for example the entire screen is frequently sharply textured with high buildings totally obscuring the sky. There are no apparent shortcuts that are taken, no gross blocking in round corners and no significant bitmapping when walls come close. The assembler engine just copes with the extra workload.

Also astonishing from a purely graphical perspective is the attention to detail that is evident throughout. The tarmac changes colour as you enter the re-designed areas of Silverstone, individual cones sit exactly where they should at Spa and tyre walls start and end in the right place at Monza. Every course has been recreated exactly based on the 1994 season, but without any of the temporary changes that were implemented. For those with a lower-end PC it is possible to alter the scenery using the extremely effective in-race detail settings. This enables even a 486/66 to run the game quite adequately.







Monaco (left) is the most texture-laden track but despite this the game only ever slows down when there are a couple of cars up close with the sun glinting off them. The barriers and the backgrounds (right) can be turned off for speed. Taking corners often forces cars onto two wheels (top)

The most pleasing graphical effects in the entire game revolve around the lighting algorithms, and in particular how other cars appear as they corner. They are good enough in VGA but watching a car overtake on the inside as the sun sparkles off the chassis is one of the most authentic looking views available outside the arcades. The quality of the effects may in this instance be measured by the drain on the processor – when there are two or three cars close by is the sole time that there is any appreciable slowdown.

But it's when behind the wheel once the graphical splendour has worn off that the exceptional nature of *GP2* becomes apparent. Although a simulation through and through, this does not preclude the great enjoyment from simply belting round like an arcade game. At times both the *Indycar* duo and *Nascar* become too laboured to be fun, and the more *GP2* is played the more apparent the advances over Papyrus' games become. The artificial intelligence of the computer-controlled cars has been improved from the already excellent (but in some places flawed) original's. The back-markers now pull over more readily and jostle for position more fiercely among themselves. Quite often, especially at the start of the race, they can be found parked sideways in the middle of the track. If so desired their misfortunes can also extend to cover the player. The car can experience a number of mechanical problems including flats, gearbox and engine trouble and although they generally don't come into play they all make the last few laps that much more tense.

The original *GP2* was famed for its user-friendliness and options and these have been improved for the sequel. The adjustable damage settings are just one example of these but the main method of catering for players of different levels comes with the inclusion of the driving aids. As with the first game, every *GP2* car features a variety of optional extras including automatic gears, brakes and the optimum driving line plotted on the track. It makes the game a much less formidable learning experience than most simulations while simultaneously enabling better results to be achieved in the long run.



Use the practice sessions for setting up the car. This element of *GP2* presents complicated subjects in a very easy to use fashion

Continued next page





The in-car telemetry systems are also vital to achieving the best results in a race. On championship level the weekend's racing includes Friday and Saturday qualifying sessions, where it is necessary to belt round gathering data and trying to lower lap times as far as possible. Return to the pits at any time to examine the results, and use them to tweak the car's brake, wing and wheel balances. It goes without saying that some degree of competence must be displayed in this area to stand any chance in the race itself. Going hand in hand with the aerodynamic setup is the pit stop strategy, which is decided prior to the green flag and will play almost as important a role in any success or failure as driving skills. And once everything is perfectly in place there are differing weather conditions to throw a spanner in the works. These are randomised for each track, the rain effect looking particularly pleasant, incidentally.

Crammond has paid at least as much attention to *Grand Prix*'s sound as he has the graphics and it all helps the player's immersion into the game. The exhaust backfiring and kerb-rumbles are the finest two examples but the whole experience, including the hectic in-game music and authentic engine drone is up to the same standard.



The physical modelling extends to significantly altering the handling to adjust for wheels being at different heights

The one factor that caps all this excellence is the handling of the car itself. From the wheels spinning on the grid, through skidding into corners, to the ploughing through sand traps, the car always feels attached to the road and never is the sense of player-control lost. Apart from when the 700bhp monsters are setup wrong, they always respond exactly as expected. It's this aspect as much as all the others destined to keep players at the wheel for a very long time.

It's almost impossible to list precisely all *GP2*'s unique features. With each new race there is always something different to spot, unexpected computer car behaviour to ensure even experts are kept on their toes, and just the plain satisfaction of driving the car round and round. Geoff Crammond has pleased everyone waiting for this game, and with it has resoundingly re-affirmed his status as the world's premier, and perhaps last, lone coder. E



Screaming past the pit lane at Silverstone. *GP2* marks a significant advance on its predecessor but some of the new features will take weeks to discover and fully appreciate

Edge rating: **Nine** out of **ten**

Continued

Guardian Heroes

Format: Saturn
Publisher: Sega
Developer: Treasure
Price: ¥5,800 (£40)
Release: Out now (Japan)



There was a time, around the race to launch Saturn and PlayStation, when it seemed the fundamental shape of videogames had changed forever. Sprites were out, replaced by shaded, textured polygon-generated characters. For any game to be worth a mention on the 'wired' pages of GQ, Esquire, FHM, and the rest of that pompous posse of style mags, it had to have a 'state-of-the-art' 3D game engine.

The question as to whether the next generation consoles have thrown up any classic games remains debatable. What seems certain is that the traditional game formats, those beloved of the 16bit years, are gaining a foothold on the new machines. More importantly, the drive to establish them there is based on gameplay, not looks, and the demand comes from the veteran gamer, not the *Ridge Racer*, *Wipeout*, *Virtua Cop*-owning next-gen casual.







The enormous sprites take full advantage of Saturn's hardware abilities. Once defeated, these giant robots become available in the six-player battle mode, the option saved into Saturn's permanent memory







As many as twelve enemy sprites will engage the party of adventurers at any one time

Guardian Heroes is a game very much in the old style of videogames, albeit with some very original 32bit twists. From the Japanese developers, Treasure (creators of the acclaimed *Gunstar Heroes* and *Dynamite Heady*, amongst others), *Guardian Heroes* is a side-scrolling 2D beat 'em up with strong RPG tendencies. In 'adventure' mode the game is a *Streets of Rage*-style on-going ruck with princess-rescuing on the agenda. In the multiplayer mode, it's a six-player, all-against-all fighter, something to finally take proper advantage of Saturn's six-player tap.

The real innovation in the game is threefold. First, whilst being unashamedly 2D,



Enemies take full advantage of any available cover, such as these barrels, to hide from and then ambush the adventurers





Most pyrotechnics are provided by the spell attacks, filling the screen with great explosions

the game offers its sprites three fields in which to interact. Via the shoulder buttons, the player can jump into or out of the screen, avoiding or engaging advancing enemies. Second, after the completion of a scene, there is a lengthy story update and the opportunity to choose where next to go. These choices are not arbitrary and ultimately lead back to a set path, but a whole web of possible routes is uncovered, guaranteeing no game has to follow the same pattern nor even use many of the same scenes. Finally, characters defeated in the adventure mode become available to play in the six-player beat 'em up option. When all the scenes in the game have been completed (**Edge** has found 28 so far) an unprecedented 45 possible playable characters become available.

With so many characters, it isn't surprising to learn the range of moves is limited and certainly not in proper beat 'em up territory. However, the use of hit combos allows proficient players to build up more damaging attacks as they master the control set. On top of the normal sword play, magic spells can be used in attack and are impressively executed. Playing as magic specialists requires a different set of tactics to the slash, punch and kick school of adventuring and further enhances the long-term appeal of the game.

Treasure has also added some rather esoteric extras. In some scenes CPU-controlled allies join the battle. To a certain extent these can be directed by the player – either taking the brunt of the frontal attacks or covering the rear. Another feature is the skill points awarded after the successful completion of scenes, used to selectively enhance any or all of six possible, almost RPG-character attributes. There are so many hidden extras, so much furious, fast-paced action it's hard not to like *Guardian Heroes* and admire the resuscitation of a winning 16bit formula.

Criticisms are few. Treasure have clearly spent a great deal of time designing the most complete, most innovative game of its type, time that might otherwise have been spent tinkering with an expensive 3D engine. While this is laudable and certainly the purist's approach to games programming, the fact remains that *Guardian Heroes* does look rather dated. More worrying is the fact that while it is fairly easy to romp through *Guardian Heroes*, the depth and variety of game elements will be lost on more apathetic players. This is true gamehead territory, make no mistake.

At first glance, *Guardian Heroes* does not sit well with its 32bit stablemates. However, as a superbly-crafted piece of gaming entertainment making full use of the more traditional areas of Saturn's potential (particularly sprite handling and sound), it will long outlast many of its fashionable rivals. A victory of substance over style? Surely something to celebrate in itself.

Edge rating: **Eight** out of **ten**





The manga intro sets the scene for the game. Doubtless somebody somewhere can understand it





The ability to build-up and improve each character is excellent. Points are awarded for completed scenes, which increase the adventurers' ability to withstand attacks

Time Gate





The early stages of the game have Will crawling on the floor avoiding security laser beams (left) and being sprayed with Mace by one of the baddy's henchman. The blocky VGA graphics suffice for scenery but cause characters' faces to look poor and highly pixellated, even for such large figures

Format:	PC CD-ROM
Publisher:	Infogrames
Developer:	In-house
Price:	£44.99
Release:	Out now







After being transported back in time Will has to escape the prison, where a system of trial and error is needed

The main problem with Infogrames' latest arcade adventure is not that it is based on historical fact but that it is a dull story dealt with in an insipid way.

The player takes on the role of Will Tibbs, a student who's girlfriend is kidnapped and taken back to 14th century France by an evil warrior who wants to coax Will – a reincarnation of a knight – back in time so that he can kill him. So far, so Hollywood.

However, the theme of this ancient order breaking into the present is not handled spookily enough – it just sets up a standard 'fight the evil thingies and save the princess' scenario. There are efforts made at atmosphere: the effective score, some marvellous camera angles and the gorgeous use of shading and perspective in some of the backgrounds (impressive considering the game is in blocky VGA mode), but the player never really gets the feeling of danger or tension that games like this should deliver.

What atmosphere there is gets destroyed by a number of irritating features. First, the player has to go on to a separate and laborious options screen to look through the inventory or choose an action (fighting, searching or pushing), which totally interrupts any gathered momentum.

Furthermore, in some sections the player can only make progress by employing a kind of systematic 'search and die' approach, ie try one thing and die, try another, and die, try one more and get through to the next section. This is an agonisingly dull means of progression which, again, totally breaks up the atmosphere (especially when there is no way the player could have predicted that a certain action would lead to death).

In the end, *Time Gate* isn't so much a disaster as a disappointment. Many of the puzzles are logical and absorbing, but many others are just trial and error. Most annoying



***Time Gate*'s cut scenes look visually impressive, but often fail to develop the plot in any way**

is the fact that the player is never sure what his aim is, apart from finding his fiancée. There are no defined short term objectives – you go from puzzle to puzzle without knowing why. *Time Gate* is a potentially excellent game, marred by serious design mistakes. Infogrames has so much experience in this area. What happened?

Edge rating: **Six** out of **ten**

Alien Trilogy

Format: PlayStation
Publisher: Acclaim
Developer: Probe
Price: £45
Release: April





The smart gun is the best weapon in *Alien Trilogy*. Here the player uses it to gently dissuade a face hugger from jumping on his head. Green acid sprays everywhere





A lone stormtrooper (top) realises he's in the wrong film conversion

Hollywood loves the videogame industry, and the feeling is mutual. These days the two can't keep their hands off each other. Films are converted to games, games are converted to films, and then there's the happy couple's frightening bastard progeny – the interactive movie.

It wasn't exactly a great surprise that *Alien Trilogy* would appear as a console title, just as it wasn't much of a surprise that it would be a *Doom* clone. In a sense, *Alien Trilogy* is trying to live up to two incredibly famous parents: Aliens (the game is definitely inspired by this more than the other two films) and *Doom*.

Given the magnitude of the task, *Alien Trilogy* copes reasonably well. First off, it's a pretty competent first person shoot 'em up – the 3D engine, albeit blocky with no pitch movement, is smooth, fast and very rarely surrenders to PlayStation's habit of warping textures when it fancies. The locations are all suitably alien-like: dark, dank and claustrophobic, yet littered with such technological detritus as VDU screens, neon signs and computer terminals. It's all very reminiscent of the classic Aliens 'Giger' look.

Although there are actually three distinct stages to the game – Colony, Mining Complex (a la Alien³) and the alien mothership, they are all characterised by this darkness and claustrophobia. In some ways this aids the atmosphere and brings the films to mind, but it can be detrimental to gameplay. The enemy creatures all move so fast and are so persistent that if one is encountered when holding just the default weapon, it's almost impossible to get away. This problem is abetted by a lack of cover. When engaged in a gun fight, it's very difficult to get into a safe position – often the only course of action is to stand face to face with the assailant and keep taking hits until someone dies. Frustratingly, for a game relying on close combat, ammo pick-ups are few, prompting heavy reliance on the useless pistol.

At times it seems as though the levels have not been as carefully constructed as they should have – almost every menace has to be dealt with immediately, rarely is the chance given to assess a combat situation and think of an intelligent way to cope (in *Doom* there were often occasions where enemies could be shot from a distance, negating any risk to the player). Of course a counter argument would be that, in the films, characters rarely got a chance to plan how to deal with the aliens, because of the latter's speed and agility. This is a valid point – at no time in Aliens does Hicks say, 'hang on, this processing plant is very badly designed for alien combat'.

Anyway, *Alien Trilogy* demands different skills than *Doom* – ammunition must be rationed carefully and secrets must be discovered – it is more about being a thorough explorer, than a clever fighter. Like the films, the player must do as much as he can without encountering a creature; it's more important to find the best route through a map.



If shot at the right time, barrels of combustible liquids can be used to take out nearby aliens





Enemies range widely in size and credibility. The queen (above) is an impressive foe, the dog (right) is slightly less awe-inspiring

In terms of enemies, *Trilogy* is the opposite of *Doom*. In the latter, most have projectile weapons and only three attack physically. Here most creatures don't have weapons, which means in areas where it is possible to get away, the player has a definite advantage.

Unfortunately, some of the creatures are rather tenuous. In the films, there are only really three types of enemy: alien soldiers, face huggers and queens. To bump up the diversity in the game, the designers have included 'infected' security guards (though infected with what is anyone's guess) and strange snake-like things, which half resemble chest bursters – *half* being the operative word.

The aliens themselves are rather disappointing. In the films they always remain a mystery, shrouded in darkness and only visible for seconds at a time. In the game however they run around in front of the player like headless chickens with little discernable sign of intelligence, ruining their whole kudos.

Despite its adequacy as a first-person shoot 'em up, the game has difficulties capturing the atmosphere of the films – perhaps because they were more based on characterisation and edginess than just killing. However, the authentic motion tracker display is a useful touch adding to the level of tension in the game – knowing there's an alien approaching, but not knowing what sort or whether it's above, below, or in the walls, is a totally unnerving experience.

There are other glimpses of the films here which add much to the experience – underlit neon tables, female announcers informing the player to clear the area, accurate weapons (the smart guns sound great) and the excellent containment chambers on level five (if the glass barriers are accidentally shot out, face huggers and aliens swamp the area – one of the best parts of the first section). These all help to keep the films in mind and so accentuate the feeling of actually being involved in one of those cinematic adventures.

Alien Trilogy is perhaps an acquired taste. It doesn't offer the same instant gratification as *Doom* and it's a much harder game. So hard, in fact, that it may deter some players used to sailing through *Doom*'s earlier levels. In its favour, *Alien Trilogy* is an attempt to apply a different set of rules to the first-person genre. Here, encountering a creature is a desperate struggle, whereas, in *Doom*, most creatures can be eventually fended off with the default weapon. Importantly, it's the closest a game has come to emulating the suspense and feeling of dread evident in the Alien films.

However, the first-person genre is getting stale. As good as this game is, everything here has been done before – if not in *Doom*, then in *Hexen*, *Descent*, *Marathon*, *Aliens Vs Predator*, etc. A movie conversion, by its definition, can't be original, but the least it can do is find original ways to exploit the license. E

Edge rating: **Seven** out of **ten**





An alien egg (top) opens up with a view to impregnating the player. Rejecting the offer with one touch of the trigger (bottom)





***Alien Trilogy* includes a few scenic features from the films, such as these hibernation chambers**





The darkness is atmospheric, but can become rather annoying, making enemies very hard to spot

Duke Nukem 3D

Format: PC
Publisher: US Gold
Developer: 3D Realms
Price: £TBA
Release: Out now (shareware) Full game TBA

There's a desperate longing in the world of PC games to see a 3D action game actually improve on the two-year-old *Doom*. Although Raven's *Hexen* could stake a claim to this accolade with its revolutionary hub-based game design and Bethesda's *Terminator: Future Shock* is technically superior, there is still no title that even comes close as a pure joy to play. The latest contender, *Duke Nukem 3D*, has been long tipped to break through this barrier.

Speed is everything in these games and *Duke Nukem 3D* is a credit to 3D Realms and its 'Build' engine. Even running in super-crisp 800x600 SVGA it blasts along faster than every other comparable 3D PC title. It's not pure speed at the expense of versatility either – it is possible to look up, down, or sideways at any time, with the bitmapped scenery undergoing minimal deformation and no speed loss whatsoever. The engine also caters for full interaction, so bullets leave pock marks on walls, enemy's blood drips down crates and earthquakes cause huge sections to shift altogether, thereby granting access to new locations. It all contributes to the feeling of being encased within a grim world as opposed to wandering through impregnable, static corridors. The effect is hugely rewarding and is surely the direction in which such games should be heading.

This potential has luckily been exploited too. So often games fail to capitalise on excellent technologies but each of *Duke Nukem*'s levels are noticeably different, being packed with huge ramps, drops, lifts, jumps and cunningly hidden secret areas. None look the same (indeed there is often a significant variation within a single building) and there is always a feeling that there is a new trick round the next corner. Each level makes good use of





A ship plunges into the city at the start of the game. Shoot these cannisters, drop through the resulting hole and begin playing the second best game of its kind on the PC, after *Doom*









3D Realms has attempted to introduce a tactical element to *Duke 3D*. Throw out a holoduke (left) and hopefully the enemy will all shoot at it instead of you. These wall mounted cameras (right) are perfect for multi-player games, allowing players to search for others and plan ambushes

the vertical 3D, so it's important to look around to open up new opportunities.

Unfortunately, the gameplay isn't quite up to the same exceptional standards of the graphics and level design. It all works perfectly on paper but somewhere in the translation to screen it becomes less captivating. At the heart of it is the characterisation of the enemy – creatures which are irritating as opposed to being malevolent or hateful. The basic monster has essentially zero personality meaning there is no driving motivation apart from the obvious kill or be killed mentality employed within such games. The pig in a blue jacket is plain silly and, when observed, effortlessly manages to destroy any of the superbly crafted tension. Just as casting is vital in Hollywood, so is character design in a videogame and *Duke*'s enemies just don't have it. Which is even more a shame considering they die with such abundant bloodshed.

3D Realms has tried to balance the action bias of *Duke Nukem 3D* with a relatively tactical element, but as a single player experience it frankly doesn't come through. Two of the weapons available in the full game have delayed effects on the surroundings and are excellent ideas. Up to 50 grenades can be scattered about and detonated at a later date and laser triggered mines can be left in corridors to catch out the unexpected. Unfortunately most of the monsters are confined to certain areas and tend not to be dramatically affected by these strategic ploys. As a multiplayer game, however, the tactics are superb. Set a few mines round a particularly desirable weapon and watch the player approach using a remote camera. Just before they realise it's probably best to stand elsewhere, they're toast. It's regrettable that the monster AI couldn't have included a more wandering, exploring element to allow this aspect of the game to come fully into play.

But if there is one single failing in *Duke* it's the overall atmosphere. It's just not scary enough. Occasionally, stalking down flickering corridors is a tense experience, but never is there the fear that causes a player to peer round the monitor anxiously, something which gamers expect today.

Technically, *Duke Nukem* is, without doubt, amazing. Its design is tight, with great touches throughout, but as a whole it just fails to hold together in the same perfect way as *Doom*. The game is so close to stealing *Doom*'s crown but it looks like it could be down to id's *Quake* to claim that accolade. **E**

Edge rating: **Eight** out of **ten**







Up to 50 grenades (above) may be scattered around and detonated simultaneously. A camera peers down as the player advances up a spiral passageway preparing to swing round and take out a monster. Bullet marks pock the walls and help establish the immersive gaming environment

Big Red Racing

Format:	PC CD-ROM
Publisher:	Domark
Developer:	The Big Red Software Co.
Price:	£44.99
Release:	March





***Big Red* provides seven types of vehicle, from dumper trucks and JCBs (top) to helicopters (above)**



Each track has its own distinct feel and design (dirt, above, water, below right), providing plenty of material for gamers with short attention spans





Despite the success of recent coin-op-derived racing titles, there is little doubt that the best racing games ever written are of a more unconventional breed. Classics such as Geoff Crammond's *Stunt Car Racer* and Nintendo's *Stunt Race FX* employ less graphical thrills and rely instead on ludicrously over the top action. *Big Red Racing* takes a similar rock and roll dash approach deliberately ignoring any guidelines scripted by Namco or Sega. The result is a driving experience completely different from any of the current racing crop.

Taking place over 24 different tracks, three of which are not even based on earth, *Big Red* pits the player against five opponents in a contest that takes the generic term 'offroad' and exaggerates the description tenfold.

For each race (in which terrains include dirt track, snow, water and alien planets) two different vehicles can be driven. Although a tactical choice to suit the player's driving skills and the individual track, it is guaranteed that the car will be flipping on its back, falling over cliff faces or jumping over mountains. Which makes *Big Red* fun to play. Rarely does the player feel cheated if they crash, or dissatisfied with the game's mechanics – each disastrous episode just leads to more thrilling and outrageous escapades.

The designers of *Big Red* have catered for these off-the-wall activities by including a flexible catch-up system. After falling off a bridge, or skidding across a frozen lake, it is likely the player will have lost vital time on his competitors. Fortunately *Big Red* provides for this with intelligent catch-up routines, ensuring there is always the opportunity to recapture the lead, or lose it if incompetent. Ardent coin-op fans, brainwashed by the mass of racing clones, may feel this defeats the purpose, but





The damage option ensures players drive more carefully – when damage reaches 100% the vehicle explodes



The two-player split-screen option is passable, but the restricted view reduces playability. Better is the six-player network link-up

then *Big Red* never claims to be a true racing experience – it's like watching a Formula 1 grand prix but with the cast of the Wacky Races taking part.

It's not easy to compare *Big Red Racing* – if anything it is similar to PlayStation's *Motor Toon GP*, with less amplified hills but with a wider selection of tracks – the Italy course in particular deserves a mention. Based on the



Of the many different views available, in-car is typically unplayable – the undulating landscape causes serious onscreen confusion

seminal road movie, The Italian Job, the player can actually trundle over the steps of concrete plazas to shortcut the opposition.

Admittedly the crude graphics don't match the lavish visuals or speed found in Sony's cartoon racer (*Big Red* runs at around 15-20fps on a P100 in full detail), and certain effects lack finesse such as the feeble water spray made by boats. Generally, though, *Big Red* is an exciting and addictive ride.

If it was faster, with tweaked gameplay and some Nintendo-style touches, it could have been one of the most memorable racing games ever. As it is, it's just plain fun.

Edge rating: **Seven** out of **ten**

Following last month's exposé of robotic beat 'em up, *Virtual-On*, **Edge** enters gangland territory for a new Model 2 fistfight. Plus, sequels to cult arcade PCBs are unleashed by Capcom and Konami

Last Bronx Bangaichi





AM3 have motion-captured characters' moves with optical technology, although more flamboyant throws required stop-motion techniques

Developer:	**Sega AM3**
Release date:	**Summer**
Origin:	**Japan**

Stepping on the toes of their AM2 allies, AM3 are to release a 3D fighting game which, graphically at least, looks very much in the *Virtua Fighter* mode. So much, in fact, that it's rumoured the game wasn't shown at AOU (see news) because of competition from AM2's *Sonic – The Fighters*, *VF Kizu* and *VF3*.

Last Bronx is set around Tokyo's inner city areas – notorious, in gaming mythology at least, for organised nocturnal street fights (the 'Bangaichi' in the title refers to the street setting of the game). The game, based on those fights, makes clear its rougher, urban influences through the employment of weapons such as Nunchaku and nightsticks – a clear departure from the disciplined martial arts encountered in the *VF* series.

As well as weaponry, *Last Bronx* participants are able to call upon various Chinese fighting techniques to throw opponents. To represent these smoothly in the game, the designers employed stop-motion techniques.

To accentuate the gang feel, the player has to join a street posse at the beginning of each game. Gangs have names like Ladies, Skater, and Teamer – the latter apparently consisting of youths in large trousers.

It will be interesting to see how this beat 'em up compares to the output of AM3's more experienced stablemate. Visually, the game looks just as impressive as *VF2* with intricately drawn characters and some impressive neon-soaked city backgrounds.

Whether *Last Bronx* will be something new or just an amalgam of past titles is, as yet, unclear. Perhaps AM3's relative freshness to this genre will mean they'll lend some innovative touches to a style that's currently straining under the weight of formula and convention.



The Tokyo skyline is a welcome backdrop for this type of game





The use of weaponry (nightstick, above; Nunchaku, top) is a welcome addition to the beat 'em up genre and accentuates the rough-edged, gang warfare feel AM3 are endeavouring to portray with *Last Bronx*





The Model 2-rendered characters suit their 'gangs' perfectly

Dungeon & Dragons Shadow over Mystara

Developer: **Capcom**
Release date: **Out now**
Origin: **Japan**







Capcom has introduced a Square-style item select (left). The armoury (above)





Although gameplay owes as much to *Final Fight* as *Golden Axe*, it could prove a welcome addition to the Capcom stable

Although cast in TSR's traditional D&D mould, *Shadow over Mystara* follows in the footsteps of Capcom's excellent 1994 coin-op, *D&D: Tower Of Doom* – probably the first successful attempt at investing what is essentially a scrolling hack and slay fest with features normally found in RPGs.

For example, each character has their own arsenal of weapons, skills and magic, and often it is only by combining different characters that bosses can be defeated; magicians deter lesser enemies while warriors attack the stronger monsters.

Shadow Of Mystara seems to successfully gel multi-player gameplay with *Golden Axe*-style arcade action. Hopefully console versions will follow later in the year.

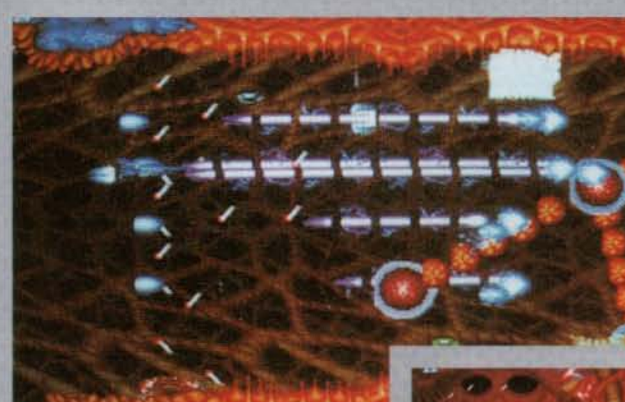
Salamander 2

Developer: **Konami**
Release date: **Out now**
Origin: **Japan**





True to the original, *S2* includes both vertical and horizontal levels





Konami has laboured over *Salamander 2*'s backdrops but the game still looks like it belongs to the 1980s

It is hard to believe that it has taken Konami more than a decade to get around to making a sequel to *Salamander* – itself a pseudo-sequel to famed horizontal blaster, *Nemesis* (aka *Gradius*). As far as follow-ups go, though, *Salamander* dared to be different by including some vertical scrolling sections as well as horizontal levels.And it was joyfully received by avid shoot 'em up fans.

For Konami, *Salamander 2* marks a return to satisfy the appetite of hardcore shoot 'em up addicts, after spending the past few years reaping the rewards of parodying its *Gradius* lineage with its *Parodius* series.

The 2D shoot 'em up is currently enjoying a revival in the arcades, and this title is sure to be accepted by arcade goers longing for action that harks back to the eighties.

Quest for fame







The legendary Aerosmith feature prominently, in the recording studio (top) or on stage (above)

Format:	PC CD-ROM
Publisher:	IBM
Developer:	Virtual Music
Price:	£45
Release:	Out now

Some games aren't meant to be taken seriously. *Lemmings*, although brilliant, had ridiculous objectives. *Monkey Island*, while extremely enjoyable, involved a ghost pirate trying to take over an island inhabited by vegetarian cannibals. *Quest for Fame*, however, takes the biscuit.

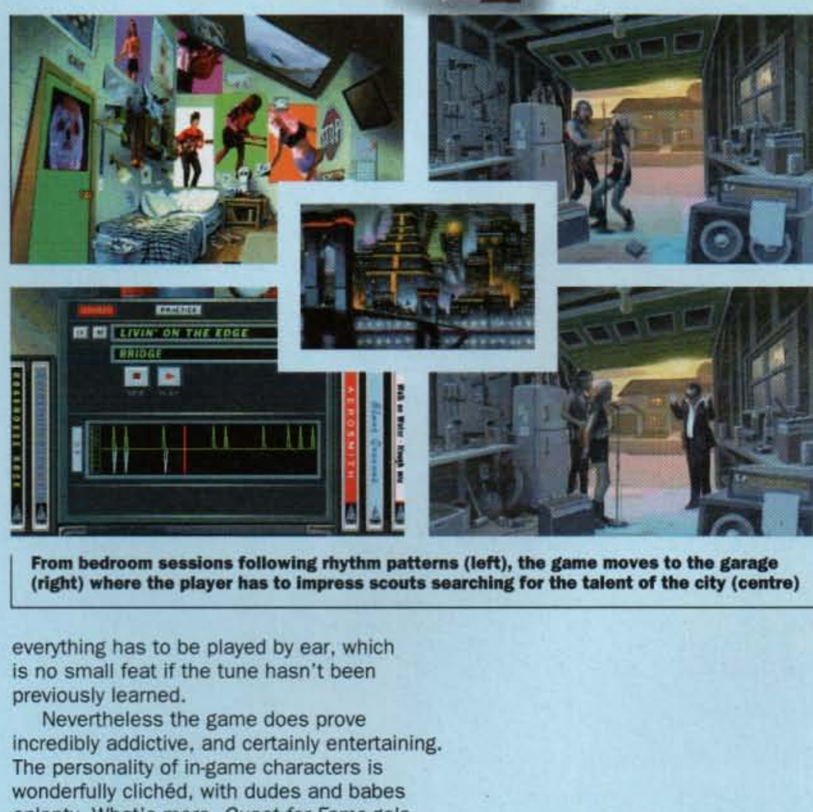
The plot is simple. Taking on the role of a would-be rock god the player has to progress through stages of guitar proficiency until he is worthy enough to play with legendary metal-heads, Aerosmith. Nothing flighty about that, perhaps. What elevates *Quest for Fame* into the realms of absurdity, therefore, is the control mechanism employed to play the artificial guitar.



By dusting off a six-stringed tennis racquet, the player can join in the headbanging using a 'plectrum joystick' which responds to individual strums. As long as the strumming follows the rhythm provided, the correct chord is played. The effect is hilarious – similar to playing in front of the mirror – only for real. By learning the lilt to a selection of tunes, it is possible to impress nightclub owners and AOR guys with the awesome guitar skills demonstrated on the tennis racquet.



Quest for Fame is not just a strum-and-progress doddle, though. In the seedy nightclubs intimidating bikers demand certain songs are played. When this happens. however, there is no strumming pattern to assist – everything has to be played by ear, which is no small feat if the tune hasn't been previously learned.



From bedroom sessions following rhythm patterns (left), the game moves to the garage (right) where the player has to impress scouts searching for the talent of the city (centre)

Nevertheless the game does prove incredibly addictive, and certainly entertaining. The personality of in-game characters is wonderfully clichéd, with dudes and babes aplenty. What's more, *Quest for Fame* gels digitised people with cartoon characters to great effect. The rough-cut biker in the first nightclub, for example, is a cartoony ogre surrounded by two weedy hoods with knives. 'Play Steppenwolfe,' he grunts menacingly.

In the long run *Quest for Fame* could lose its appeal since the tunes on offer number around ten, meaning irritation can creep in when playing them over and over. But for novelty value and sheer first-time entertainment, it's certainly worth a look. **E**

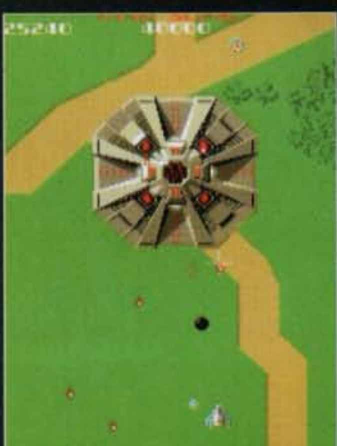


Included are some great game over sequences. Here the player's career takes a dive into circus acting

Namco's second trip down memory lane visits six more antiquated destinations – some have aged well while others just look decrepit

Namco Museum Volume 2

Format:	PlayStation
Publisher:	Namco
Developer:	In-house
Price:	¥5,800 (£40)
Released:	Out now (Japan)



***Xevious* claims to be the first game to feature rendered graphics**





It's possible to play *Gaplus* and others in full screen mode (right) – so long as you turn the TV on its side...

As Namco's first collection of classics (**E**29) makes its way to the UK this Spring, Japan has already received its second instalment of antiquated tearjerkers. *Volume 2* is another mixture of both the highly respected and the relatively obscure, with pride of place going to 1984 *Galaga* sequel, *Gaplus*, a game that manages to be even more furious than its predecessor.

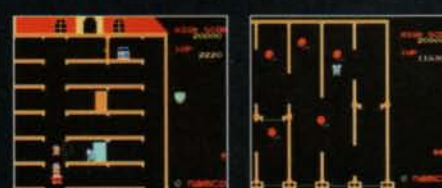
Instead of *Galaga*'s dual fighter feature, *Gaplus* allows the player to collect attacking aliens with a beam laser to augment the ship's own firepower. The design of the aliens, the speed of the sprites and the rewarding sound effects all combine to make this an essential blast. Complimenting this shoot 'em up revival, is the vertical scroller, *Xevious*, which was famous in its heyday (1982) because Namco claimed it was the first game to feature computer rendered graphics – its simple, well-shaded sprites a precursor to the ambitious work that Rare embarked upon ten years later. As it stands in 1996, *Xevious*' gameplay obviously falls way short of the standards set by contemporary shoot 'em ups. However, there remains something curiously benign and engaging about *Xevious*, no doubt helped by its size and uninterrupted structure (the scrolling never stops), and its eery sci-fi ambience.







***Volume 2*'s mediocre also-rans are *Dragon Buster* (top), *Grobda* (left) and *Cutie-Q* (right)**



Ranking third in the six-game pack, *Mappy* uses a strange trampoline effect to avoid enemies



Unfortunately, as with *Volume 1*, the other games included on this collection are mere padding by comparison. *Dragon Buster* is a poor 1984 *Wonder Boy in Monsterland*-style romp, *Grobda* (1984) is a tough clone of the Atari VCS game, *Combat*, while *Mappy* scores higher as a kind of *Pacman* meets *Elevator Action*. The positively archaic *Cutie-Q* (1979) wraps up the collection, although a custom *Breakout*-style controller (available with the Deluxe game pack or separately for ¥2,000/£15) is required to do it justice. **E**



Namco Museum Vol. 3

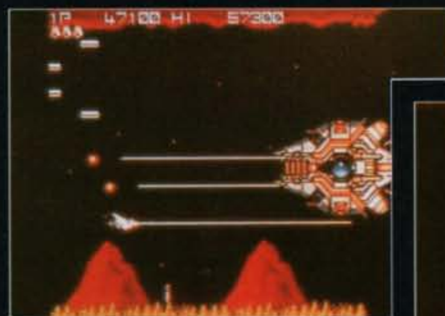
Possibly due to a snippet of *Galaxian* appearing as the loading game on *Ridge Racer*, Namco has saved its most memorable invaders clone, the original *Galaxian* (below right), until volume three. Due in May, it also includes *Dig Dug* (below left), *Tower Of Druaga*, *Pole Position 2*, *Phozon* and *Ms Pac-Man*. As usual, all games run under emulation – before each game loads, a chunk of code is first dumped into PlayStation's RAM (perhaps explaining the loading times) which emulates the original arcade board and then runs the 'original' coin-op code. Truly arcade perfect...

Gradius Deluxe pack

Format:	PS/Saturn
Publisher:	Konami
Developer:	In-house
Price:	¥5,800 (£40)
Released:	March (Japan)

Besides, Namco, Konami have arguably one of the most respected back catalogues of quality arcade games. Instead of taking the Namco route, though, and releasing a generic series of classics, so far Konami has chosen to release twin-pack compilations of its games, most notably, *Parodius* and *Twin Bee* for Saturn and PlayStation. Now it is readying a 32bit compilation based around its legendary *Gradius* series, which includes the first two instalments of the series. The original *Gradius* (retitled as *Nemesis* in the UK) was first released in 1985 and remains one of the company's most treasured properties. Pioneering the concept of a selectable weapons system, and introducing 'multiples' (droids that follow your ship around the screen increasing its firepower), Gradius has since made it to the MSX, NES, PC-Engine and even the antiquated Sharp X-68000.

While the second Gradius game was, in fact, the 1986 coin-op *Salamander* (see p83), it is the 1988 sequel *Gradius II*, previously known in the UK as *Vulcan Venture*, which also appears on this new CD (the splendid PC Engine CD ROM² version was reviewed in issue one). Despite the undeniable quality of the *Gradius* series, however, **Edge** is still waiting for a *Castlevania* compilation…



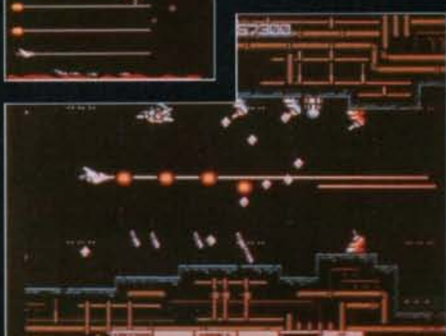






The Saturn version (above, right) is, rather unsurprisngly, indentical to the PlayStation game







Despite Konami's fixation with its *Gradius* parody, *Parodius*, the original series is a better blast. (PlayStation version, above, right)





Glory lap for Konami

Konami has announced plans to update its superb early eighties *Track and Field* series (*Hyper Sports*, above left) with a PlayStation game based on the 1996 Olympics due to be held in Atlanta in July. Currently scheduled for release in June, *Hyper Olympics* features a fast, smooth 3D engine, simultaneous four-player action, and 11 different events including swimming and hurdles (above right). Prepare for frantic button tapping...

Irem Arcade Classics

Format:	PS/Saturn
Publisher:	Imax
Developer:	In-house
Price:	¥5,800 (£40)
Released:	April 26 (Jap)

Continuing this growing trend, the company who made its name off the back of just one game, the mind-blowing 1987 shoot 'em up *R-Type*, has licensed its back catalogue of arcade games for release on both PlayStation and Saturn. The first games to make the transition to 32bit are the 1984 scrolling beat 'em up *Kung Fu Master* (known as *Spartan X* in Japan), the bike racing game *Zippy Race* (1983), and *10-Yard Fight*, a popular American football coin-op. Given the age of these titles and their relative simplicity, **Edge** can only hope that plans exist for the translation of the seminal *R-Type* – a game to which only the PC Engine has ever done justice.







Kung Fu Master* (top left), *10-Yard Fight* (above), *Zippy Race



***R-Type* (main) and its superb sequel could be set for conversion to 32bit**

viewpoint



Express yourself in **Edge**. Write to: **Edge** letters, 30 Monmouth Street, Bath, Avon BA1 2BW

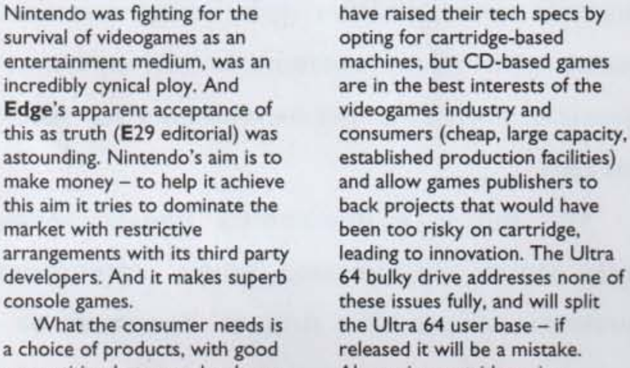
Hiroshi Yamauchi's speech at the recent Shoshinkai show, where he declared Nintendo was fighting for the survival of videogames as an entertainment medium, was an incredibly cynical ploy. And **Edge**'s apparent acceptance of this as truth (**E**29 editorial) was astounding. Nintendo's aim is to make money – to help it achieve this aim it tries to dominate the market with restrictive arrangements with its third party developers. And it makes superb console games.

What the consumer needs is a choice of products, with good competition between developers. Trying to raise standards by limiting developers is incredibly dangerous, and if implemented successfully would stagnate the market. If the market becomes more adult-orientated, then I believe competition will eliminate those companies which rely on film/comic/TV licenses, and it is these companies that I believe are damaging the market.

Ultra 64 itself is a cynical piece of hardware. Other super console manufacturers could have raised their tech specs by opting for cartridge-based machines, but CD-based games are in the best interests of the videogames industry and consumers (cheap, large capacity, established production facilities) and allow games publishers to back projects that would have been too risky on cartridge, leading to innovation. The Ultra 64 bulky drive addresses none of these issues fully, and will split the Ultra 64 user base – if released it will be a mistake. Also, using cartridges gives Nintendo much greater leverage with third party developers. Despite this there is no denying the machine's power or the appeal of some of the games – *Mario 64* looks best candidate for game of the decade.

Eventually Sega and Nintendo need to move out of the home hardware market and concentrate on what they do best – producing the best games of their respective genres in the world. Then the hardware war can be fought on tech specs and price by the likes of Sony and Panasonic, with future machines perhaps even compatible.

Gary Moran, Birmingham



Is Hiroshi Yamauchi genuinely concerned over the state of the videogames industry, or just looking for his next yen, asks Gary Moran

Nintendo's vision isn't one that **Edge** wholeheartedly subscribes too, but the company is addressing a problem that is effectively suffocating the industry. Too many games are being produced across too many formats, and the quality of the average game is far lower than it should be. **Edge** isn't naive enough to assume Nintendo is taking such action out of courtesy to the videogames industry – it is simply smart enough to understand three good games are far more valuable than 20 mediocre ones.

Why is it incredibly dangerous to limit the number of developers? How many, genuinely, have the skills and resources to create a Nintendo-quality game? Granted, in the long term such an approach would be detrimental to consumer choice, but for ensuring a range of quality launch titles it's a commendable plan. As you suggest, in business terms it's likely Nintendo will be just as uncompromising as they always have been, but at least the company understands that an open-door policy towards third parties engenders undesirable side effects.

A glut of poor quality, cloned software is one reason behind the premature collapse of the 16bit market and is at least as culpable as Nintendo's own pricing and licensing policies. As you said yourself, *Mario 64* looks like a candidate for game of the decade. Surely that's what counts, not storage space.

I read with interest **Edge** 29's Ultramen feature in which NCL chairman Hiroshi Yamauchi made the point that 'unless the gaming industry starts tightening up and reducing the number of games produced, then it's heading for a crash,' with which you agreed. He is not alone in his sentiments as other articles have shown. Of course, I'm not offering a complete solution, but perhaps this could initiate a train of thought.

Picture a company league table. Rated on an average review score – a software house, seen to be otherwise outstanding for a releasing a 'killer app', would find themselves near the bottom of the table if they follow their success with a barrage of poor quality titles. In contrast, the companies which apply their efforts towards quality games development at the expense of quantity would be nearer the top, representing a more assured future buy.

Obviously, if no-one took notice of the table it would be of little use, but if it became well established and consumers began to make buying decisions based



Rather than limiting U64's software to a 'Dream Team', Steve Norris believes a 'superleague' should determine who produces good product

on a quality track record – or perhaps, simply, the stigma attached to them – perhaps companies would think a little harder before releasing trash and bringing down their average.

Steve Norris

An interesting idea, but one that would be difficult to implement and potentially hazardous to maintain. Would, for example, a company be penalised for releasing a substandard film license product, or the game's developers (who possibly had to make compromises to hit an unrealistic deadline)? And the fact that few companies ever release consistently good or bad games would mean most companies would end up with a misleading rating. Based on this system, a company such as Rare, that employs enormous resources and reports to Nintendo's exacting standards, would score highly, whereas the average developer, whose software release schedule is a mixture of the efforts of in-house teams of varying degrees of talent, would score less well. In this case, their overall rating would only consider the output of the company as a whole – and not just, say, the efforts of its 'A' team, whose games might have been highly regarded.

A few years back good old Ace magazine introduced a system where it rated games publishers in the style of a stock market based on review marks across a selection of monthly games magazines. However, that was back when the UK publishing industry was self-contained and games were often developed and published by the same companies. Nowadays matters are confused by the disparity between publishers and developers and the number of international companies releasing products. As for the method of rating companies, would you want your company's reputation hanging on the review marks published in videogames magazines?

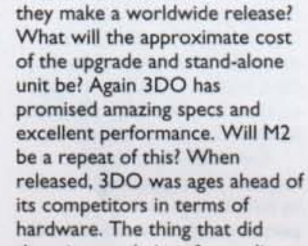
With the current hype over Nintendo 64, I am wondering what has happened to the 3DO M2 technology purchased by Matsushita. If I am not mistaken, the release of the machine was supposed to be sometime during the second half of 1996. Isn't it about time Matsushita made an official announcement concerning M2. Haven't they learned from the lukewarm acceptance of 3DO that publicity is of paramount importance?

Advertising aside, I wonder whether the original M2 specs promised by 3DO can still be trusted. I understand Matsushita is the company with most patents in Digital Video Disc. There is speculation that DVD technology will be available for M2. Can this be substantiated? If a stand-alone M2 box contains the DVD drive, will the M2 upgrade for the current 3DO contain it, too? Most importantly, when will M2 be released in the UK? Will Matsushita release M2 in Japan first, to test the market, or will they make a worldwide release? What will the approximate cost of the upgrade and stand-alone unit be? Again 3DO has promised amazing specs and excellent performance. Will M2 be a repeat of this? When released, 3DO was ages ahead of its competitors in terms of hardware. The thing that did them in was their software line-up. Will M2 have killer-apps such as Super Mario 64?

Chin Tang,
chintang@gollum.demon.co.uk

3DO is in a state of change at the moment with work on M2 and third party licensing being shifted into Matsushita's hands from April. Matsushita is currently in the process of forming a strategy for M2, although it's likely a European or US launch won't occur until '97.

It's unlikely DVD technology will be included in the first M2



With M2 slated for late 1996, why hasn't anything been announced, asks Chin Tang

systems, but instead, will be implemented when cheap enough to be considered a massmarket proposition. Pricing, performance and software are still relatively unknown quantities but **Edge** will endeavour to provide as many details as possible over the coming months.

I would like to respond to Daniel Oosterhoff's letter in **E**27. As a kid I owned a 16K rubber-keyed Spectrum. I took active part in the 'my Spectrum is better than your C64' debate, and when I upgraded to a 128K machine with built-in tape recorder I thought nothing could beat it.

Those days have gone, however, and all that's left are fond memories of classic games like *Sabrewulf*, *Everyone's a Wally* and *Doomdark's Revenge*.

To try and relive those days, by producing compilations of retrogames, in my opinion would be a mistake. No doubt 25-30 year-olds will rush at the chance to play *Jet Pac* or *International Karate+* on their shiny new PlayStations or Saturns. Once loaded, though, will they still be happy? I fear not.

How on earth can *Yie Ar Kung Fu* or *Way of the Exploding Fist* compare to *Battle Arena Toshinden* or *MK3*? Just look at **Edge**'s retroview of *Exploding Fist*... the game looks terrible; and do you remember how slow it was? I do.

No, retrogaming is not the way ahead. It is for the software companies out to make a short fast buck, but not for gamers. Gremlin (who remembers *Monty Mole*?) has the right idea. They have taken the age-old classic *Gauntlet* and totally revamped it in a way that makes *Loaded* look new and semi-original. I take my hat off to them.

My advice to Danny Oosterhoff and others is this: don't waste your time buying old classics only to find out how dated they are. If you must relive the past find games like *Loaded* or keep loading up *Ridge Racer* and play *Galaxian*.

Stephen Craig,
Irvine

True, a lot of early 8bit computer games, once thought of as rich in gameplay, do now seem terrible. However, it's unfair to tar all early games with the same brush. In terms of gameplay, arcade titles have developed little since the mid-eighties. Just take a look at Namco's immediate and devouring *Gaplus* for utterly addictive playability. *Elite*, too, is still playable and absorbing.

A basic rule of thumb is that if a game relies on graphics exclusively for its thrills then, obviously, it has little chance of surviving. Similarly, those genres that have been refined and enhanced over the years will suffer the most. Shoot 'em ups,

viewpoint



Multi-platform OSs like *Taos* (above) and *JAVA* are the future, believes Paul Gray

for example, have progressed little (explaining why mid-eighties examples like *Flying Shark* are still fun), while beat 'em ups have evolved beyond all recognition, with early efforts now warranting little more than a cursory glance.

For years, gamesplayers, developers and programmers have gone on about a multi-platform environment where one piece of software would work on a number of platforms. **E**9 touched on this by revealing *Taos*, an operating system that would be targeted on a number of platforms. Obviously replacing the OS is a hard thing to do today, with the market being dominated by a select few. But now we have the future of multimedia and game development – *JAVA*.

JAVA is a programming language based and improving on *C++*, but with one difference – one piece of code will run on any OS without change. It does this by interpreting a specially compiled code rather than raw compiled & linked code like *C*.

A host of companies are licensing the language at the moment, mainly for internet multimedia development, but I feel there is great potential for the games industry to use this remarkable language.

Imagine a game on CD that would run on PC, Saturn or PlayStation. Imagine the cost savings in general (lower development costs equals cheaper games). Buy one game and run it on your PC, console etc. Buy a new system and all your old games will run on it.

Let's hope Sony, Sega, etc, license the language, too.

Paul Gray, Aberdeen

JAVA is fine for internet use, but for games use there is still a problem – the language is interpreted at runtime (ie with each processor cycle) which can be very slow (compared with compiled *C* code). Some improvement is made by partial compilation and partial interpretation, but then the compiler causes problems by being slow itself, or being needed on the target system, which could swallow 2Mb of Saturn's or PlayStation's RAM. Perhaps in five years time *JAVA* will be feasible, but for now the best option for is binary porting like *Taos*, and even this can struggle to cope with radically different hardware with multiple CPUs.

Consider also that *JAVA* requires the supporting machine to hold library code for the ported program to work – each machine must supply graphics routines, etc, which someone would have to write. Whoever does so is unlikely to feel happy about sharing.

As a graphic designer who uses a Mac I am always disappointed to note your unwillingness to cover Mac game releases. True, until now it may have been justifiable in absence of more than a trickle of games software around for Apple machines, but things have suddenly changed quite enormously. I was amazed to see just how much space the HMV store (Oxford Street, London) devotes to the stuff – more than Sega, Nintendo and just about anyone else except the ubiquitous PC.

What's the excuse now? More and more major players (LucasArts, et al) have woken up to a growing Mac market and some of the biggest releases (*Myst*, in particular) found their first home on Macs. I recently bought *Dark Forces* and have been blown away by the sheer playability of it. Apart from it being better than every review I've read gives it credit for (and I do read PC magazines), it demonstrates two major things.

First, the Mac is a very capable and powerful games machine in its own right. My Quadra 610 with only 8Mb of RAM handles the CD-ROM at speed without a glitch. Sound is no problem, either. Expanding RAM is cheaper than buying a games console with higher returns in view of just how versatile the machine is.

Second, there can now be little justification in your magazine keeping up the pretence that Macs are not 'serious' game machines and therefore not worth covering. Macs will be around, as will the software written for them, long after the Ultra 64s of the world have faded to digital oblivion.

Phil Ford, London

Edge's coverage of the Mac is in no way dismissive. On the contrary, the problems experienced with PC titles (failure to install, complicated memory configurations, set-up screens, etc) means the magazine would prefer to cover the equivalent Mac, rather than PC games. However, most Mac games are direct ports of PC titles, and therefore do not warrant coverage in a magazine that deals primarily with new software. A shame, since many Mac games feature improved graphics, and sometimes even enhanced gameplay (benefiting from hindsight, perhaps?).

When original Mac titles do appear, such as *Marathon 2* (see **E**30), that are to a sufficiently high standard to be included, rest assured **Edge** will feature them.

Why is it you seem obsessed with frame rate on games for consoles? Since by definition the 50Hz interlace PAL TV standard can only display a maximum of 25fps what difference does it make if the latest PlayStation or Saturn game can 'only' manage 30fps? Sure, you can get 60fps on a good monitor but who is going to pay £200 for one when they can hook their console up to a TV and suffer only slightly less picture quality?

Also, could we not have more technological features, for example more on the new PC video cards or something on the latest Silicon Graphics equipment used to design games etc? Bear in mind your cover says 'interactive entertainment' and games are merely a subset of this.

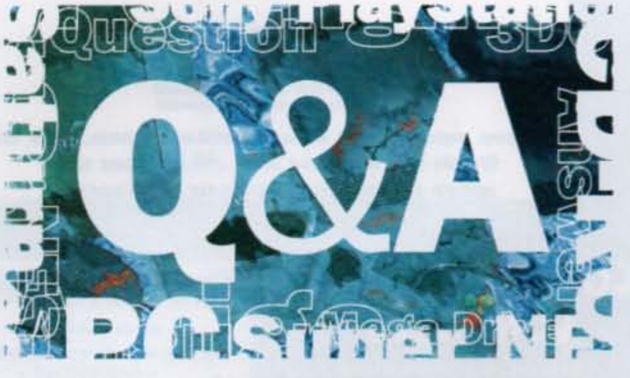
Neil Roberts, London

Taking a standard PAL TV image, the television displays 50 interlaced fields, which translates to 25 frames a second for standard television broadcasts. However, many videogames (eg *Tekken*) output a signal with twice as many frames per second as broadcast TV, ie a separate frame for each field. Although interlaced, and therefore alternate fields are offset, a smoother image is still displayed.

You will have noticed recent changes in **Edge** to cater for the evolving entertainment market. The magazine now has an internet page and a technical page dedicated to the latest programming advances. **Edge** hopes to continue this trend over the forthcoming months by introducing new features and sections to ensure the magazine stays at the forefront of interactive entertainment.



Forget retrograming reminiscence, says Stephen Craig, developers should follow Gremlin's lead and revamp old classics as modern titles



Send your **questions** to Q&A, **Edge**, 30 Monmouth Street, Bath, Avon BA1 2BW

Q **1.** In **E29** you referred to *Mario Kart-R* taking advantage of Nintendo64's high resolution mode. Would this mean a 640x480 screen resolution or would it be less because of a TV's limited display potential?
2. Does Nintendo64 have a link-up capability similar to that available for PlayStation?

Neil Munro, Oxon

A **1.** No, remember that *VF2* uses Saturn's 704x480 mode and despite some slight screen shimmer (caused by the interlacing of the TV screen) 640x480 games will run fine.
2. It's not known yet what Nintendo has up its sleeve in this respect although the inclusion of four joypad ports implies the company may rely on multi-player games that can be played on a single machine.

Q I've noticed that in recent issues there has been some mention of the infamous 'disc swap' method used to play, for example, UK PlayStation games on US machines. The actual mechanics of how this works has never been divulged by **Edge** (nor the Official Playstation Magazine) although it has suggested 'it is thought, however, that this damages the CD drive and all future machines will incorporate a revised Boot ROM (version 2.1) which detects if a disc is swapped over', (Q&A, **E29**). The techniques used in the disc swap process have been common knowledge on the internet for a long time and it seems no FAQ is complete without it, along with the tip that you need the RGB lead to view the swapped games in colour.

Furthermore, there seem to be two 'disc swap' methods – the 'grab the spinning CD as the PS logo appears and swap the discs' or the 'tape the lid sensor down, play the first few seconds of a host CD which should run on that machine using the 'CD Play' option, remove the disc, insert the chosen game, exit the 'CD Play' and close the lid'. To my mind, the first option is pretty risky and you stand a very good chance of damaging the CD drive of the unit fairly rapidly (as suggested in **E29**). However, I can't see how the second method can cause any damage since the disc is allowed to stop spinning and nothing is done which is outside the normal operation of the machine. So, could you verify the 'risks' of the 'disc swap' method?

Could you also explain why swapping the discs works and why you sometimes get different results with different discs. For example, loading *Wipeout* having used say, the US *Ridge Racer*, gives different results to say, using US *Destruction Derby*. Furthermore, does a UK game running on a US machine play at 50Hz or 60Hz? And why do Sony and all the other manufacturers insist on using country codes and protection in this way? What's wrong with a universal machine (PAL/NTSC adapted, naturally) with universal software?

I personally own a US PlayStation for the very reason that it plays games full speed and full screen and was considerably less expensive to buy. Case in point is *Ridge Racer* – perfect on the US machine but pathetic on a UK one. I have had no trouble playing UK software using the second disc-swap method but would obviously not want to do long-term damage.

James Wheeler, J.J.Wheeler@bnr.co.uk

A Swapping discs over effectively convinces the machine it is running the correct CD – the first CD imparts this information while the second CD is accessed just for the game data. Because the second method doesn't require any physical force to stop the CD, it is unlikely this will damage the drive. However, the recent release of games that refuse to work on a 'foreign' machine (such as *FIFA Soccer*) means that this technique could soon be made redundant anyway. PlayStation games will only run at the speed they have been coded to run at – just because you're running a PAL game on a US PlayStation, for example, doesn't mean it'll run at full screen and at 60Hz – the speed is determined by the software not the hardware in the case of PlayStation.

Q I'm wondering how much effort Nintendo are going to put into the PAL version of their superconsole, Nintendo64. Do you know if it will support a full-screen, 60Hz picture, or will Nintendo try and optimise the PAL games released for it (usually a non-starter)? Essentially, is there going to be any way (short of buying an import machine) to experience a quality full-screen, full-speed picture? Also, I heard that cartridges will be internationally compatible, ie UK machines will be able to play Japanese and US carts. Is this true?

Nick Ferguson, Edinburgh

A Obviously with the UK machine now not due until the Autumn, it's too early to say if Nintendo will take the time and trouble to ensure that PAL UK software is up to scratch. Given the efforts of Sony and Sega to maintain the quality of PAL PlayStation and Saturn games it's doubtful Nintendo would want their machine to be compared unfavourably to its 32bit rivals. It's extremely unlikely that cartridges will be compatible across different territories although the single Nintendo64 branding will remain the same universally.

Q I own a UK PlayStation which is set up by using a lead connecting the three AV outputs to the Scart socket on the TV.



Is PlayStation's 'disc-swap' too risky, asks James Wheeler

1. Does this arrangement give a better or worse picture than using the official Scart lead?
2. Is it true that S-Video gives the best picture?

sbuni@mistral.co.uk

A **1.** & **2.** AV (or composite as it's also known) gives the worst picture on the UK machine with RGB Scart, and RF provides the best results. As the UK machine has no S-Video socket the quality of the picture can't easily be tested but it's usually the next best option after RGB Scart.

Q and A

You can depend on Edge to cut through the technobabble and give you straight answers. You can write to us at Q&A, Edge, 30 Monmouth Street, Bath, Avon BA1 2BW. Alternatively, fax us on 01225 338236, or email us at edge@futurenet.co.uk.

Edge regrets that it can't answer questions personally, by phone, post or email.

Over the edge

A look at what happened during the making of this issue

Edge signs off with a Wipeout competition, a small round-up of innocuous stories and some plain, hedonistic self-indulgence

Wipeout gear up for grabs

Psygnosis, in cooperation with hip Chelsea fashion emporium, Million Dollar, is giving **Edge** readers the chance to win some painfully trendy *Wipeout* merchandise (so exclusive, in fact, the only place **Edge** has spotted such gear being worn was, bizarrely enough, in a Tokyo club late last year). As well as T-Shirts (short and long-sleeved), Million Dollar have designed cute, tight dresses and T-Shirts for girls as well as record bags, girly rucksacks and bobble hats. Put simply, it's the hippest selection of gear the games industry has ever devised (which isn't surprising given the usual standard).



Edge has two items in every style to give away. To stand a chance of winning answer the following questions and send them on a postcard addressed to: *Wipeout* gear compo, **Edge** magazine, 30 Monmouth St, Bath, BA1 2BW. Closes 10 April.

Questions:

1. Which company designed *Wipeout*'s packaging?
2. What famous bands appear on the European version of *Wipeout*?
3. Which Tory MP suggested *Wipeout* shamelessly glamourises drugs?





Driving a hard bargain

Edge makes no apologies for printing this, but a story recently appeared on the internet in the US reciting an unusual, but authentic, set of instructions included with a PC hard drive purchased from a shop in Louisiana. Perhaps people would read instruction manuals if they were written like this…

IMPORTANT! READ THIS BEFORE USING YOUR DEVICE!
Congratulations! You have purchased an extremely fine device that would give you thousands of years of trouble-free service, except that you undoubtedly will destroy it via some typical bonehead consumer manoeuvre. Which is why we ask you to: Please for God's sake read this owner's manual carefully before you unpack the device. You already unpacked it didn't you? You unpacked it and plugged it in and turned it on and fiddled with the knobs, and now your child, the same child who once shoved a polish sausage into your videocassette recorder and set it on 'fast forward', this child also is fiddling with the knobs, right? We might as well just break these devices right at the factory before we ship them out.

We're sorry. We just get a little crazy sometimes because we're always getting back 'defective' merchandise where it turns out that the consumer inadvertently bathed the device in acid for six days.
So, in writing these instructions, we naturally tend to assume that your skull is filled with dead insects, but we mean nothing by it.
Okay? Now let's talk about:

Unpacking the device
The device is encased in foam to protect it from the Shipping People, who like nothing more than to jab spears into outgoing boxes.
Please inspect the contents carefully for gashes or Ida Mae Barker's engagement ring, which she lost last week, and she thinks maybe it was while she was packing devices.
Warning: Do not ever as long as you live throw away the box or any of the pieces of styrofoam, even the little ones shaped like peanuts.

If you attempt to return the device to the store, and you are missing one single peanut, the store personnel will laugh in the chilling manner exhibited by Joseph Stalin just after he enslaved Eastern Europe.

Operation of the device
Warning:We manufacture only the attractive designer case. The actual working central parts of the device are manufactured in Japan. The following instructions were translated by Mrs Shirley Peltwater of accounts receivable, who has never actually been to Japan but does have most of 'Shogun' on tape.
Instructions: For results that can be the finest, it is our advising that: NEVER to hold these buttons two times!! Except the battery. Next taking the (something) earth section may cause a large occurrence! However. If this is not a trouble, such rotation is a very maintenance action, as a kindly (something) virepoint from Drawing B.

(This is a shortened version of the original text)



Tribes are gathering

Keen to associate PlayStation with the UK's hippest entertainment events, Sony has chosen to sponsor the upcoming dance music festival, Tribal Gathering, held on 4 May in Oxford. Besides the live performances from (amongst others) Underworld, Chemical Brothers, BT, Goldie, and sets by the world's most talented DJs, including Laurent Garnier, Carl Cox, Paul Oakenfold, (and basically, anybody who's anybody in the dance music scene), PlayStation 'pods' will be accessible all day for those who prefer an interactive approach to chilling out. Hopefully, Sony won't find that their PlayStation pods get uprooted by tribes of messed-up techno-hippies…

Edge's essential selection
Tunes that inspired some, but annoyed others, during **E31**:

1. **Underworld** Second Toughest in the Infants
2. **William Orbit** Hinterland
3. **DJ Food** Refried Food
4. **Man with No Name** Moment of Truth
5. **Brad** Shame
6. **Cynus X** Hypermetrical
7. **Tori Amos** Boys for Pele
8. **The Infinity Project** Mystical Experiences
9. **Odd Man Out** Various
10. **Dance Mania 96** Various (don't ask…)

Archer's a Virgin



Author of such bestsellers as *3D Pool* and *Dropzone*, and bloke-with-fast-cars-and-lots-of-cash, Archer Maclean, has signed a deal with Virgin, granting them the publishing rights to future projects. Maclean is in the process of setting up Awesome Developments – a small hand-picked team of 'the very best in the business'. So once Miyamoto, Suzuki, and Crammond are on board, he'll probably trade in his £200,000 GTO for a Maclaren F1 or something…

Next month



Murder, Death, Kill is Shiny Entertainment's subtly-titled foray into the world of 32bits. **Edge** finds the Californian team targeting a more mature audience. **Plus**, from next month, new sections on videogame pioneers, computer graphics, multimedia and music

Issue thirty-two
Friday 5 April 1996





100% Edgeculture

